

SEQUENCE LISTING

<110>

Oberste, M. Steven  
Maher, Kaija  
Kilpatrick, David R.  
Pallansch, Mark A.

<120> TYPING OF HUMAN NON-POLIO ENTEROVIRUSES

<130> 14114.0353U2

<150> PCT/US00/07828

<151> 2000-3-24

<150> 60/127,464

<151> 1999-3-31

<160> 86

<170> FastSEQ for Windows Version 3.0

<210> 1

<211> 20

<212> DNA

<213> Artificial Sequence

<400> 1

gcertgcaatg aytctctcwggt

20

<210> 2

<211> 18

<212> DNA

<213> Artificial Sequence

<400> 2

ngcncdgdgat tgntgscg

18

<210> 3

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<221> modified\_base

<222> (3)...(0)

<223> I

<221> modified\_base

<222> (6)...(0)

<223> I

<221> modified\_base  
 <222> (12)...(0)  
 <223> I

<221> modified\_base  
 <222> (15)...(0)  
 <223> I

<400> 3  
 gcncngayt gntgnccraa

20

<210> 4  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> modified\_base  
 <222> (9)...(0)  
 <223> I

<221> modified\_base  
 <222> (12)...(0)  
 <223> I

<221> modified\_base  
 <222> (15)...(0)  
 <223> I

<221> modified\_base  
 <222> (18)...(0)  
 <223> I

<400> 4  
 atgtaygtnc cncnggngg

20

<210> 5  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> modified\_base  
 <222> (3)...(0)  
 <223> I

<221> modified\_base  
 <222> (9)...(0)  
 <223> I

<221> modified\_base  
 <222> (15)...(0)  
 <223> I

<400> 5  
ggngcrttnc cytcngtcca

20

<210> 6  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<221> modified\_base  
<222> (6)...(0)  
<223> I

<221> modified\_base  
<222> (8)...(0)  
<223> I

<221> modified\_base  
<222> (9)...(0)  
<223> I

<221> modified\_base  
<222> (18)...(0)  
<223> I

<400> 6  
acrtgncnng tytgcattgt

20

<210> 7  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<221> modified\_base  
<222> (3)...(0)  
<223> I

<221> modified\_base  
<222> (15)...(0)  
<223> I

<400> 7  
awnttytayg ayggntgg

18

<210> 8  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<221> modified\_base  
<222> (3)...(0)  
<223> I

<221> modified\_base  
 <222> (5)...(0)  
 <223> I

<221> modified\_base  
 <222> (6)...(0)  
 <223> I

<221> modified\_base  
 <222> (9)...(0)  
 <223> I

<400> 8  
 tananngtnc ccatrttrtt

20

<210> 9  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> modified\_base  
 <222> (9)...(0)  
 <223> I

<221> modified\_base  
 <222> (15)...(0)  
 <223> I

<221> modified\_base  
 <222> (18)...(0)  
 <223> I

<400> 9  
 atgtayrtnc cnmcngnggc

20

<210> 10  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> modified\_base  
 <222> (3)...(0)  
 <223> I

<221> modified\_base  
 <222> (6)...(0)  
 <223> I

<221> modified\_base  
 <222> (12)...(0)  
 <223> I

<221> modified\_base

<222> (15)...(0)  
 <223> I

<400> 10  
 ggnggnggrt cngtnakytt

20

<210> 11  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> modified\_base  
 <222> (3)...(0)  
 <223> I

<221> modified\_base  
 <222> (12)...(0)  
 <223> I

<221> modified\_base  
 <222> (15)...(0)  
 <223> I

<400> 11  
 gangaraayc tnatngarac

20

<210> 12  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> modified\_base  
 <222> (6)...(0)  
 <223> I

<221> modified\_base  
 <222> (12)...(0)  
 <223> I

<400> 12  
 cccatnakrt cnatrtccc

19

<210> 13  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> modified\_base  
 <222> (9)...(0)  
 <223> I

<221> modified\_base

```

<222> (11)...(0)
<223> I

<221> modified_base
<222> (12)...(0)
<223> I

<400> 13
gtrctyacna nnagrtcyct 20

<210> 14
<211> 19
<212> DNA
<213> Artificial Sequence

<400> 14
tsaarytgtg caargacac 19

<210> 15
<211> 18
<212> DNA
<213> Artificial Sequence

<400> 15
stgyccagat ttcagtgt 18

<210> 16
<211> 20
<212> DNA
<213> Artificial Sequence

<400> 16
ggnacncayr tnathtggga 20

<210> 17
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<221> modified_base
<222> (4)...(0)
<223> I

<221> modified_base
<222> (9)...(0)
<223> I

<221> modified_base
<222> (15)...(0)
<223> I

<400> 17
gcctrtrtnt grtgncraa 20

```

<210> 18  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> modified\_base  
 <222> (3)...(0)  
 <223> I

<221> modified\_base  
 <222> (6)...(0)  
 <223> I

<221> modified\_base  
 <222> (12)...(0)  
 <223> I

<221> modified\_base  
 <222> (15)...(0)  
 <223> I

<400> 18  
 ggnacncayr tnrntntggga

20

<210> 19  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> modified\_base  
 <222> (3)...(0)  
 <223> I

<221> modified\_base  
 <222> (6)...(0)  
 <223> I

<221> modified\_base  
 <222> (9)...(0)  
 <223> I

<221> modified\_base  
 <222> (15)...(0)  
 <223> I

<400> 19  
 acngcngyng aracnggnca

20

<210> 20  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> modified\_base  
 <222> (3)...(0)  
 <223> I

<221> modified\_base  
 <222> (6)...(0)  
 <223> I

<221> modified\_base  
 <222> (9)...(0)  
 <223> I

<221> modified\_base  
 <222> (15)...(0)  
 <223> I

<400> 20  
 acngcngtng aracnggng

19

<210> 21  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> modified\_base  
 <222> (6)...(0)  
 <223> i

<221> modified\_base  
 <222> (9)...(0)  
 <223> I

<221> modified\_base  
 <222> (15)...(0)  
 <223> I

<400> 21  
 cargcngcng aracnggngc

20

<210> 22  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> modified\_base  
 <222> (2)...(0)  
 <223> I

<221> modified\_base  
 <222> (5)...(0)  
 <223> I



<221> modified\_base  
 <222> (8)...(0)  
 <223> I

<221> modified\_base  
 <222> (11)...(0)  
 <223> I

<400> 22  
 cncncggngg nayrwacat

19

<210> 23  
 <211> 888  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> CA1, strain Tomkins

<400> 23

ggattggg	cgtattct	gagctg	ccattg	acagag	catc	caaaaa	atgc	actaac	cact	60
gtacaaa	ata	caacac	aatc	aggac	ctact	cattcaa	aaag	aagttc	cagc	120
gtggaaa	acag	gtgcta	ctag	tcaagt	tagaa	ccaggt	gact	tgattg	aaac	180
ataaac	atga	gacaaa	agatc	tgaag	catct	atcga	atctt	tctttg	gccg	240
gttgcg	atac	ttggtt	ttgtc	aaacg	ccaaa	ccaact	gaca	caaaca	ccaa	300
aaaac	atgga	gaata	tcata	tttag	aaact	cacca	actca	gaagaa	aaact	360
acgtact	caa	ggttt	gattt	ggaa	tgacc	atagta	aatta	cagaga	gggt	420
gtcaat	gtcc	cattg	cgcaa	ttatg	tgtac	caaata	atgt	acgttc	cccc	480
gaaccac	aat	catgg	gatga	ttac	acgtg	caatct	ttcta	ccaacc	catc	540
accact	ggaa	atgct	cctcc	cagag	tgtca	attcca	tttg	ttgga	atagg	600
tcacact	tttt	atgat	ggttt	ctcac	agatt	cctctt	gact	caatca	gtgc	660
aataag	tatg	gttaca	cttc	aatca	atgac	tttggt	accc	tggca	attag	720
gaat	atgacc	cagtgc	aaagt	ggatgc	aaaag	gcccga	gtgt	atatta	aaacc	780
cgcatg	tgggt	gcccc	agacc	accac	ggggc	atgcct	taca	agaata	gcac	840
gacccat	cag	caact	gtaat	gacca	aagtc	gcagac	atca	ggac	gtat	888

<210> 24  
 <211> 882  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> CA3, strain Olson

<400> 24

ggagat	ccag	tggaag	actt	aatcg	ccaat	acagtt	gcta	ggact	ctaga	gagaata	aaacc	60
tctcca	aactc	ataata	caaac	ggcagg	caac	accacc	gtta	gcgag	cacag	catcg	gtacc	120
ggttc	agtgc	ctgcgt	ttgca	agctg	ctgag	actggg	gctt	cgtct	aaac	cacaga	tgag	180
agtat	gatag	aaacac	gggtg	tgttg	tcaat	aggaat	ggag	tgatt	gagac	tagcat	caac	240
catttc	tttct	cccga	gcggg	gcttg	tggga	gtgct	gaaca	tactt	gatgg	aggcac	ctca	300
aaagg	ctttg	aagttt	ggga	tataga	catc	atggg	ctttg	ttcag	cttcg	cagaa	agcta	360

gagatgttca	cctacatgcg	gttcaacgct	gaattcacct	ttgtcgcgac	tttgagtgc	420
ggaacaactc	cccatataat	gttgcaatac	atgtatgtgc	cccctggagc	tcccaaacct	480
caggaaaagag	attcattcca	atggcagact	gcaaccaacc	catccgtgtt	tgcgaaaatg	540
agtgaccctc	ctccgcaagt	ttcagtacct	ttcatgtctc	ctgctagcgc	ctaccagtgg	600
ttttatgatg	ggtacccaac	atthgatgat	agaccacaga	cctctaactc	tccctacgga	660
caatgcccc	ataacatgtt	gggcacattc	gcggtgcgca	ttgttagcaa	gacgcctgcg	720
gagagagact	tgcgcgctcg	tgtttacatg	aaactgaagc	atgtgcgagc	atgggtaccg	780
cgacccataa	gttcacagcc	ttacgtcttg	aagaactacc	ccaactatga	tggaacccaa	840
atcgtgcccc	gtgcctaaaga	tcgagaagac	ataaagaaca	ca		882

&lt;210&gt; 25

&lt;211&gt; 915

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; CA4, strain High Point

&lt;400&gt; 25

ggtgatgcaa	tcgctgatgc	tatacaaaac	acagttacat	ctactatata	gagagtcaca	60
accaacactg	ttgggcaaga	tgcaacagct	gctaacacag	cacccagctc	tcatagtttg	120
aacactggcc	tagtccccgc	gcttcaagct	gctgagacag	gagcttcac	cacagccacg	180
gatgggaatt	tgattgagac	tagatgtgtt	gtaaactcca	atggtacacg	tgaaaccac	240
attgagcatt	tcttctctag	gtcagggctg	gtgggagtta	tggaggtaga	tgatacgggt	300
actagtggca	agggattctc	aaactgggac	attgacatca	tggcgtttgt	gcaactgcgc	360
cgtaaaactc	aggcattttac	atatatgcgg	ttcgacgcag	agttttacct	tgtaaccaat	420
ttggagaacg	ggctcacgaa	taatagtgtg	atacagtaca	tgatgtgtacc	acctggagcg	480
cctaaacccg	atgcccggga	atcattccag	tggcaaaactg	caaccaatcc	gtcagtcctt	540
caaaaaatgg	acagtcgcgc	acctcaagtt	tcagtaacct	tcatgtcacc	agccagtgcc	600
tatcaatggg	tctatgacgg	ttacccccacc	tttgggcccc	actcggagac	atctaatacta	660
tcttacgggc	aatgtcccaa	taatatgtctg	ggaacattct	cggccagggt	tgtagcaag	720
caaataacca	atcagaaatt	ccagatccgt	atthtatctac	ggctgaagag	ggtgagggcg	780
tggatcccca	gacctttgag	atcgagccg	tacattttaca	gaaactaccc	cacctatggt	840
actaccatcc	aatacctggc	caaagatagg	cgcaagatca	ctgaaactga	ttataatgct	900
gaacagcgca	cgc					915

&lt;210&gt; 26

&lt;211&gt; 885

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; CA5, strain Swartz

&lt;400&gt; 26

ggcagaccaa	ttgcagatat	aatagaagga	gcagtagctc	aaactaccac	cagagcacta	60
agtggaccaa	ttcagccagt	gacagcgggc	aacacctctc	ccagttcaca	tcggcttggt	120
acggggcaag	tgccagcttt	gcaagcagca	gaaacgggag	ccacctcgaa	tgcgaccgac	180
gagagtttga	ttgaaaccag	gtgtgtggtc	aacagacatg	gagtcatgga	aactagcatt	240
gaacacttct	tttcacgctc	aggcttggca	ggaattttga	taattgagga	ctccggtact	300
tccacgaaa	gctacgccac	ttgggaaatc	gatgttatgg	gatttgtcca	gctgaggcgt	360

aaactagaga	tgttcacata	catgcgattt	gatgcagagt	tcacctttat	cacagcagaa	420
aggaatggca	acaccagccc	aatacccatc	cagtacatgt	atgtcccacc	cggagcccca	480
gtccctactg	gtagggagac	attccaatgg	caaacagcga	ccaatccatc	cgtgatctca	540
aagatgactg	atccaccagc	ccaggtgtct	gtaccattta	tgagcccagc	cagtacttat	600
caatggttct	acgatggcta	ccccacgttc	ggagaagttc	cagtgactac	gaacttgaac	660
tatggacagt	gccccaaaca	caaaatgggc	actttctgca	tccgcatggg	ctcaggtgta	720
tctacaggca	aggacgtcac	tgtgcgcatt	ttcatgaagt	tgaagcatgt	gcgcgcctgg	780
gtgccaaagg	ccatcaggag	ccagccttac	ttgttaaaga	attatcccaa	ctttgacaag	840
tcaaatattg	tagacgcata	atcgaacagg	acatatacca	ccact		885

&lt;210&gt; 27

&lt;211&gt; 915

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; CA6, strain Gdula

&lt;400&gt; 27

aatgaccca	tttcaaagtc	aatagaaaat	gctgtgagca	cactcgctga	caccacgata	60
tcacgtgtta	cagcggccaa	cactgctgct	agctcccatt	cccttggtac	tggacgcgtg	120
ccggcggttg	aggctgcgga	gacaggggca	agttccaacg	ctagcgatga	gaacctgatt	180
gaaactcggt	gtgtgatgaa	tagaaatgga	gttaacgaag	caagtgtaga	acacttctac	240
tcccgtgcag	ggctagtagg	agttgtggag	gtgaaagact	caggcactag	tcaggacggg	300
tacacggtgt	ggcccataga	tgtgatgggc	tttgtgcaac	agcggcgcaa	gttagagcta	360
tctacttaca	tgcgctttga	cgctgaattt	acctttgtgt	ccaatctcaa	tgacagcaca	420
acacccgga	tgctattgca	gtacatgtac	gtgcgcgcgg	gtgcgcccac	accagacggt	480
aggaagtcat	atcaatggca	aacagccacc	aacccttcaa	tattcgcaaa	gttgagtgc	540
ccaccgcccc	aagtgtctgt	ccatttcatt	tcaccggcgt	cagcctacca	gtggttctac	600
gatggttacc	ccacgttttg	cgaacacaag	caagctacta	atttacaata	cggtcagtgc	660
cctaacaaca	tgatggggca	ttttgctatt	cggacagtta	gtgaatccac	caccgggaaa	720
aatgtccatg	tccgggtgta	catgagaatt	aagcacgtaa	gagcatgggt	gccagacct	780
ttcagatccc	aagcttacat	ggtcaaaaac	taccgcacat	acagccaaac	aatatccaat	840
actgcagccg	atcgtgcgag	cataaccact	acggactatg	aggggtggcgt	accagcaaac	900
ccgcagagaa	ctttt					915

&lt;210&gt; 28

&lt;211&gt; 888

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; CA7, strain AB-IV

&lt;400&gt; 28

ggagacgaaa	tactcgacct	aatcgagagt	gctgtacaga	ataccactaa	agccattacc	60
agctcaatcg	acacaaaaac	tggtgctaac	actcaagcta	gccaaacatc	tataggcttg	120
ggggagggtt	ccgctcttca	agctgctgag	acaggatcgt	cttcgctcgt	ttcggacaag	180
aacatgatag	aaacaagggt	tgtcgtaaac	aaacacagca	cagaggaaac	cagcattaca	240
aacttctact	ccagggcggg	cctagtgggg	gttgtgaaca	tgccagtaca	aggaaccagc	300
aacacaaagg	gtttcgcaaa	gtgggggata	gatataatgg	gctttgtgca	gatgaggcgc	360

aaacttgagc	tcatgacata	catgagattc	tccgccgagt	ttacggttcgt	acccagcact	420
cctgggggag	agactactaa	ccttatactg	caatacatgt	atgcacctcc	cggagctccg	480
ctgccaaacca	ggcgggattc	atacgaatgg	caaacatcca	ctaacccttc	tattatcagc	540
aagatggcgg	acccacccgc	tcaggtatcg	gttccattcc	tttctcctgc	atcagcatat	600
cagtggttct	atgatggcta	ccccacattt	gggaaacacc	caatagatca	ggacttccaa	660
tatggcatgt	gccccaaaca	catgatgggc	acattctgtg	tgcgcatgat	cggtagggggc	720
aaaccgaccc	aatcagttac	catacgtata	tacatgagat	taaagcatat	ccgtgcatgg	780
gtgccccggc	cactgaggag	tcagaattac	actatgagga	attaccggaa	ctacaacggg	840
ggcgcaataa	aatgtacatc	aaaaagcaga	gctaccataa	caacctta		888

&lt;210&gt; 29

&lt;211&gt; 882

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; CA8, strain Donovan

&lt;400&gt; 29

ggagattcca	ttgaagacat	aataagcaac	actgtcacc	gtacactgca	acaaatcagt	60
gccccatcac	acgacactac	agcagccaac	acctcagtga	gtaatcataa	aattggtacg	120
ggggatgtcc	cagctctcca	agctgcagag	actggcgcta	cttccaatgc	ctcagacgag	180
aacatgattg	agacacgatg	tgtgttaa	cgcaatgggg	ttgtggaaac	tagtttggac	240
catttctttt	caagagcagg	ccttgtggga	gtgatcaatg	tgcaagatgg	cggcactcag	300
aagggttttg	aagtgtggga	catagatgtc	atggggtttg	ttcaactcag	gaggaagttg	360
gagatgttca	cgtacatgag	gttcaacgcc	gagttcacat	tcgtatccac	actcgcggat	420
ggcacaactc	ccagagtgat	gttgacgtac	atgtacgttc	cacctgggtgc	ccccaaacct	480
caggagagag	attcgtttca	gtggcaaa	gcaaccaacc	catcagtatt	ttgcaaaatg	540
agtgaccctc	ctccacagg	ttccgttcct	ttcatgtcac	cagctagtgc	ctaccaatgg	600
ttctacgatg	ggtacccaac	attcgatgat	cgaccggcca	cctcaaacca	cccgtacggt	660
cagtgcacca	ataacatgat	gggcacattc	gcagtgcggt	ttgtcagcaa	gaccccagcc	720
acacgggatc	tgcgtgtcag	agtgtacatg	cgccgtgaa	acgtgcgcgc	atgggtaccg	780
agacctatcc	gatctcaacc	ctatatattt	aaaaactacc	caaattatga	tggcacaaag	840
ataacgtcga	catctaagga	taggcaaagc	atcaaaacaa	ca		882

&lt;210&gt; 30

&lt;211&gt; 894

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; CA10, strain Kowalik

&lt;400&gt; 30

ggcgaccccg	tggaggacat	catccacgac	gctttgagca	gcactgtgcg	gcgggccata	60
actagtgggtc	aagatgtcaa	cacagcgggc	ggtaccgctc	ctagctctca	caggttggag	120
actggtcgtg	ttcccgcctt	acaagcagca	gaaactggag	ccacttctaa	cgctacagat	180
gagaacatga	tagaaaacgcg	gtgtgtcatg	aacagaaatg	gagtgttgga	ggcgactata	240
agtcatttct	tctcacgctc	aggtttgggtg	ggtgttgtca	atctaactga	cggaggcacc	300
gatacaacgg	gatatgcagt	gtgggacatt	gacatcatgg	gttttgtgca	actgcggcgg	360
aatgtgaga	tgttcacata	catgagattc	aacgctgagt	tcacattcgt	cactacaaca	420

gaaaatggcg	aggcaaggcc	atztatgtta	cagtatatgt	atgtacctcc	aggtgcccct	480
aagccaacgg	gtagagatgc	ttttcagtg	caaacagcga	caaatccatc	cgttttcggt	540
aagctcacag	atccacctgc	tcaggtatca	gtccccttca	tgtcacctgc	tagtgcctac	600
caatggttct	atgacgggta	tccaacattt	ggacaacacc	cggaaacatc	taatacaaca	660
tatggacagt	gccctaacaa	catgatgggg	acctttgctg	tgagagtagt	gagtagagtg	720
gctagccagc	tcaaactaca	gacacgagtg	tatatgaagc	ttaagcatgt	gagagcatgg	780
atccctaggg	caataagatc	ccagccttac	ctcctaaaga	attttccaaa	ttatgatagt	840
agtaagatca	catacagcgc	aagagatcgt	gccagcataa	aacaagctaa	tatg	894

<210> 31  
 <211> 912  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> CA11, strain Belgium-1

<400> 31						
gggccaatag	aagaaatcat	ctcaactggt	gccagtaacg	cgttggcgct	cagtcaaccc	60
aagccagtg	acaactctgt	acaaaacacc	caacaaagtg	ctccagtgca	tagccaggag	120
gtgccagcat	tgaccgcagt	ggagacaggg	gcgacaagtg	atgtggttcc	atctgaccta	180
attcagacta	gacacgtatt	gaatgttaaa	tccaggtctg	aatccaccat	cgagtcattt	240
tttgcaagag	ctgcatgtgt	aaccattatg	caggtggaca	atttcaacgc	aacctctgtg	300
gaagacaaaa	gaaagtgtgt	tgctaaatgg	gcaatcacct	acactgatac	cgtccagctg	360
agacggaaat	tagagttttt	cacttattct	agatttgact	tagagatgac	ttttgtgcta	420
actgagagat	actactccca	aagctcaggg	catgctagat	ctcaggtgta	ccaaattatg	480
tatgttccac	caggggcacc	cacgcctagt	gcatgggacg	actacacatg	gcaaacatcc	540
tccaacccat	ccattttctt	taccaccggc	aatgcaccac	cgcgcatthc	aattccattt	600
ggtggaatcg	ccaatgcata	ctcacacttt	tatgatggct	ttagtagagt	acctttggag	660
ggagaaaacaa	cagacacagg	agacgcttac	tacgggctca	cttcaataaa	cgattttggt	720
acacttgacg	tcagggtagt	taatgactac	aaccagacca	gggtggagac	aaggattaga	780
gtatacatga	agcccaaaca	tgtgagagtc	tggtgcccgc	gacctccaag	agcggtaagc	840
tacagaggac	ctggagtcga	cctcctatca	acatcagtaa	cacctttatc	caaacatgac	900
ctagcgacat	ac					912

<210> 32  
 <211> 888  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> CA12, strain Texas-12

<400> 32						
ggagatacag	tgagtgatat	gatcgaaaat	tccatcaacc	gaattaccag	tgcaattttcc	60
actaccaga	cacaccagac	agcagctgac	actagagtta	gtacacacag	gtagggcacg	120
ggggaggtgc	cacctttaca	agcagcagag	acaggtgcca	cctccaacgc	aaccgacgag	180
aacatgattg	aaacacgctg	tgctgtcaac	aggcacgggg	tgagcgagac	cagcgtggaa	240
tactttctct	ctcgtctctg	tttggcagga	atagtcacgc	tggaggatgc	aactgccact	300
aataaggggt	atgccacatg	ggagattgat	gtcatggggg	tcgcgcaact	gcgtcgcaag	360

ctggagatct	tcacatacat	gcgcttcgat	gcagagttca	cttttgtggc	aacagaacgc	420
aatgggagca	ccagcccggg	catgatgcag	tacatgttcg	tgccccctgg	cgccccctgtt	480
ccaacagggg	gagatacctt	ccaatggcaa	tctgctacta	acccttcagt	gctagtaaaa	540
atgacggatc	caccggccca	agttgccatc	ccctttatgt	ctccagctag	tgcataccaa	600
tggtttctatg	atggatatcc	tacctttgga	gaaagaccag	ttacaaccaa	catgaattat	660
ggacagtgtc	ccaacaacaa	aatgggaact	ttttgtatac	gcactgtctc	cggtgaagcg	720
tcagggaaaa	acatcactat	acgtattttt	atgaggttga	agcatgtaag	agcgtgggtg	780
cctcgcccaa	ttagaagcca	gctatatctg	cttaaaaatt	acccaactt	tgataacact	840
aagatcctca	acgcctccca	caacagagct	tctatcacat	caaacaca		888

&lt;210&gt; 33

&lt;211&gt; 927

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; CA13, strain Flores

&lt;400&gt; 33

gggttggaag	atctaataca	acaagttgcg	tctaacgc	tacaattgtc	ccagccaaca	60
agaccggcac	tcccaccagc	cgagcagagt	gtccccaaca	ctaaccaaac	aactccagaa	120
cactccaagg	aagtcccagc	gttaacggca	gttgaaactg	gcgccacgaa	tcctctagag	180
cctggcgaca	cagttcagac	tagacatgtg	ataaaaacta	gaagtagaag	tgaaagtaca	240
gtggagtctt	tctttgcgcg	aggtgcatgt	gtaaccatta	tgggagtgga	caactataat	300
gagacattga	aaggagacca	gaagtctact	ctattttaca	cctggaacat	cacctacact	360
gacacagtcc	agctacggag	aaaactggaa	atgttcactt	actccagggt	tgacatcgag	420
tttacttttg	tgggtgactga	acgctactac	tcatcaaaca	gtgggcatgc	tctgaaccaa	480
gtgtaccaaa	ttatgtatgt	accacctgga	gcaccagtgc	caaagaaatg	ggatgattac	540
acctggcaaa	cctcttcaaa	cccgtccata	ttctacactt	atgggtcagc	accacccagg	600
atatccatac	cctttgtggg	tatagcaaac	gottactccc	acttctatga	tgggtatgcg	660
acagtgccct	tgaaaactga	caccacagac	tcaggagcag	cctactatgg	agcagtatcc	720
ataaacgact	tcggactgct	tgcagttcgc	gtcgtcaatg	aacataatcc	agtcagagta	780
tcatccaaaa	ttagagtgtg	tatgaaacca	aaacatgtca	gggtatggtg	tcccagacct	840
ccaagggctg	tagagtatta	tggaccagga	gtggactaca	aggcaaacac	tttaacaccg	900
ttgccaataa	agaatttgac	tacttat				927

&lt;210&gt; 34

&lt;211&gt; 888

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; CA14, strain G-14

&lt;400&gt; 34

ggtgacaaag	tggcgacat	gattgagacc	gcagtggaga	agaccgtgtc	ctcactaact	60
tcccctattc	aaacccccac	agccgccaac	acaaacgtga	gtaatcatcg	aattgagctg	120
ggggaagtcc	cggctttgca	agctgctgaa	accggcgcg	cgtctcttgt	gtctgatgaa	180
tacttgatag	agactcgttg	tgtagtgaat	agccatagta	cagaggaaac	tacagtgggg	240
cacttctttt	caagagcggg	gttggtggga	gtgattgacc	tcccattaca	gggaacagtc	300
aacacaggag	gattcgcctc	gtgggatatt	gatgtaatgg	gatatgttca	gatgagaagg	360

aaacttgagc	tgttcacata	tgcccgttcc	gatgctggag	ttaccttcat	agcttccacc	420
ccagatggcg	aggtgaagcc	agtgttctta	cagtacatgt	tcgtccccc	tggtgcacca	480
aaaccaacag	ggcgcaacac	ctacgaatgg	caaactgcaa	caaacccttc	tgtgttggtc	540
aagagcacag	atcctccagc	acaagtctct	gtaccgttca	tgtcaccagc	cagcgcatat	600
cagtggttct	atgacgggta	cccaaccttt	ggaaagcacc	tgcttctgtg	tgactttcag	660
tacggtatga	ccccaaataa	catgatggga	tcgttctgtg	ccaggatagt	gggggaagga	720
gcgcctagt	tacacttggg	tatccgtatc	tacatgcgca	tgaaacacgt	gcgggtgtgg	780
attccacgac	ctatgcgcag	ccagccatac	gttgccaaga	attaccctaa	ctacaagggg	840
tctgagatca	agtgcgcata	atctagtcgt	aagtcaatca	ccacatta		888

&lt;210&gt; 35

&lt;211&gt; 912

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; CA15, strain G-9

&lt;400&gt; 35

gggccaatag	aggagatcat	ctcgaccgtc	gccagcaatg	cacttgcct	cagtcagcct	60
aaaccggtgg	ataattctgt	acaaaacacc	caacagagcg	cgcccgtgca	cagccaagag	120
gttccagcat	taacagcagt	agagactgga	gcaacaagt	atgtggtgcc	agctgatcta	180
gtgcaaacca	ggcatgtagt	gaatgtcaag	tccagatctg	agtccactat	cgagtcgttc	240
tttgcaagag	ctgcctgcgt	gactattatg	cagggttgata	actttaatgc	caccaccacg	300
gaggacaaga	ggaagtatt	tgccaaatgg	gccatcacat	acacagacac	agtacaattg	360
aggaggaaat	tgggaattttt	cacgtactcc	aggttcgatc	ttgagatgac	tttcgtgcta	420
actgaaagat	actattctca	gagctcgagg	cacgctagat	cgaggtgta	tcaaatcatg	480
tacgtccctc	caggagcacc	aacaccaa	gcatgggatg	attacacgtg	gcagacgtct	540
tctaaccctc	caattttctt	caccactggg	aacgcacccc	cacgggtttc	aatcccattt	600
gtgggcattg	caaatgctta	ctcacacttt	tatgatggct	tcagcagggt	accttttgaa	660
ggagagacca	ctgactcagg	tgacgcttat	tatggcctca	cttctatcaa	tgactttgga	720
acacttgcag	taagagtggg	caatgactac	aaccacagcg	gagtgagagc	aaggatcaga	780
gtctacatga	aacctaagca	tgtgagagt	tggtgtccac	gaccccttag	ggctgtgagc	840
tacagaggac	ccggtgtgga	cctactgtcc	acctcagtga	cgccctatc	taagcatgaa	900
ttgacaacgt	ac					912

&lt;210&gt; 36

&lt;211&gt; 918

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; CA17, strain G-12

&lt;400&gt; 36

ggcattgaag	acttgatcca	acaggttgca	tcgaatgcgc	tgcaaatctc	acagccgacg	60
cgtccggcac	tgccctctac	agaaagtctt	cccaacacac	aacaatcggc	accttcgcat	120
tctcaagagg	tcccggcgct	gacagcagtt	gagacaggcg	cgacaaatcc	attggagccg	180
tctgacacgg	tacaaacaag	gcatgttatc	cagactagat	ccaggtcaga	gtccacaata	240
gagtccttct	tcgcgcgtgg	tgcatgtgtg	acaatcatga	cagtggaaaa	ttttaacgcg	300
actgaggcgg	cagacaagaa	aaagttgttc	gccacttgga	atattacata	cacagacaca	360

```

gtgcagctca gaaggaagtt ggagatgttc acttactctc gatttgacat tgaatttacc 420
tttgtcacca cagaaaggta ctacgccagt aactcaggcc atgcgcgtaa tcagggttac 480
caactcatgt atgtaccccc aggagcccct gtgccacaac aatgggatga ttacacgtgg 540
caaacttcct ccaacccatc ggtgttttac acatacgggt acgctccagc gcgcatttcc 600
ataccatttg tagggatagc taatgcctat tcccactttt atgacggcta tgcagtgggtg 660
ccattgaaag attccacca ggatgctggt gctgcctatt atggtgcaac ctcaattaat 720
gattttggaa tgttggcggg gagagtagtc aacgaattca acccagccag aatcacatct 780
aaattgagag tgtacatgaa accaaagcat gttagggtgt ggtgtcctag accaccaagg 840
gtggtgccgt acttcggacc cgggtgtgat tataaggata gtttgacacc gctttctaca 900
aaagcactca acacttat
918

```

<210> 37

<211> 927

<212> DNA

<213> Enterovirus

<220>

<221> misc\_feature

<222> (0)...(0)

<223> CA18, strain G-13

<400> 37

```

ggcttggaag acctcatcca acaagtggcc acgaatgcat tgagtctgtc gcagcccaca 60
agaccgcgac ttccaccagc agaacaaagt gtgccaaaca ccagtcagac caccaccagaa 120
cattcaaagg aagtacccgc actcactgca gtggagaccg gtgcaaccaa ccatttgaa 180
ccaggtgaca cagtgcaaac tagacatggt gttcaaaca gatcaaggag cgaaagtacg 240
gtggaatcct tctttgcaag aggggcgtgt gtcacgatta tgggagttga caattacaat 300
gaaagcttga ccagtagtca aaaatccacc ctattcgcca cttggaatat tacatacact 360
gatacagtac agttgaggag aaaattggaa atgttcacct actccagatt tgacattgaa 420
tttaccttcg tagtaactga acgttactac tcgtcaaaca gtggccatgc cttgaatcag 480
gtgtatcaaa tcatgtatgt gccaccaggc gtcccaatc ctaagaagtg ggatgattat 540
acctggcaaa catcatcaaa cccctcaata ttctacacct atggaacagc accaccaga 600
atttcgatcc cttttgtggg cattacaaac gcgtactcac atttttatga cggatatgcg 660
actgtaccac tcaagacaga cactacggat ccgggggcgg ccttctatgg agcagtttcc 720
atcaatgact ttggtttgtt ggcggtgcga gttgtcaacg agcacaaccc ggtaagagtg 780
tcttcaaaga taagagtgt catgaagcct aaacatgtca gagtgtggtg cccacgacca 840
ccacgtgccg tggagtacta cggaccaggg gtagattaca aggcaaacac attgacacct 900
ctccctacca agaacttaac tacttat
927

```

<210> 38

<211> 888

<212> DNA

<213> Enterovirus

<220>

<221> misc\_feature

<222> (0)...(0)

<223> CA19, strain 8663

<400> 38

```

ggtattgatg atatcataga taatgttgta accaatgctt tgaagggtgc catgccacaa 60
gttcaagata cgcaatctag tggaccagtt aactcaaaag aagtacctgc attaacagct 120
gttgaaacag gggctactag tcaagttgac ccacagacc taatagaaac tagacatggt 180
attaataacc gcctcagatc tgagtgcaca atagaatcat tctttgggag gtcagcatgt 240
gtggccataa ttgggttatc taacaaaaa cccaccagtg acaatgcagc caagctcttt 300

```



gctacatgga	agattagtta	tcttgatatg	tatcaattga	gaagaaaatt	ggaattcttc	360
acatactcca	gattttgatct	tgagtttaacc	tttgtaattt	cagaaagatt	cttcacctca	420
acttcagctg	ctgcaagaga	ttatgtatac	cagatcatgt	acattccccc	aggagcccct	480
atccctcagg	tatgggatga	ttacacatgg	caatcatcca	caaaccctc	aatattctac	540
accacaggaa	atgcatgccc	tagagtgtcc	atcccttttg	ttgggatcgg	tgcagcatac	600
tctcacttct	atgatggatt	ctcttttagta	cctttcaata	ccatcgatgc	tggtgcttca	660
aacaggtagc	ggtacaccac	cataaatgat	tttgggacta	tggcaatcag	gatagttaat	720
gaatacgacc	cagtcacaat	tgatgcaaaa	gtcaggggtt	acatgaaacc	aaagcatatt	780
aaggtgtggt	gccccagacc	tccacgggca	gtagcataca	atgggccaac	agtgaatttt	840
aatgaaaacc	cccatgtaat	gacagcagtt	gctgatatta	gaacttat		888

&lt;210&gt; 39

&lt;211&gt; 909

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; CA20, strain IH-35

&lt;400&gt; 39

ggtatcgaag	atcttatcac	cgaagttgca	agcaacgctc	tgaagttgtc	acaaccaaaa	60
cccagcacac	aacagagttt	accaaact	agtagctcag	aaccaactca	ctctcaggaa	120
gcgcgggcat	tgaccgcagt	agaaacagga	gcaactagta	gcgtagtacc	agctgatctg	180
gtccagacgc	ggcatgtgat	acaaacacgt	agccgaagtg	agtctacagt	tgagtcattc	240
tttgctcggg	gggctgtgtg	aacaatcatg	tcagtggaaa	attacaatga	aaccgctatc	300
gcagagtcca	aattatttac	caagtggaa	attacctaca	cagacacagt	ccagttgaga	360
agaaaactag	agatggtcac	atactccaga	tttgatattg	agttcacatt	tgtggtgact	420
gagcggtacc	actccgcaaa	ctcaggtcat	gcactaaatc	aagttttacca	gatcatgtat	480
gttcctccag	gtgcaccagt	gccacaaaga	tgggacgact	acacatggca	aacgtcatcc	540
aaccctcag	tctttttatac	ctatggtaca	gcaccagcca	gaatatcgat	tccatatgta	600
ggcatagcca	atgcctactc	gcattttttat	gatggcttcg	ccaaagtgcc	cattgaaggc	660
gagacgtcag	atccaggtga	tgcatactat	ggtgcaacgt	ccatcaatga	tttcggcatc	720
ttagccatac	gtgtggtcaa	cgaacacaat	ccagtgcaag	tttcttccaa	gattagagtg	780
tacatgaaac	ctaaacatgt	gcgcgttttg	tgtcccagac	cacctagagc	tgttccatac	840
tttggtcccc	gggttgatta	taaaggtgac	gcctccacac	cactatcacg	caaggattta	900
accacctat						909

&lt;210&gt; 40

&lt;211&gt; 888

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; CA22, strain Chulman

&lt;400&gt; 40

gggattgagg	atacaatcga	aaaagtggtt	ggtgatgctc	taaggggtctc	aatgccacaa	60
gttgccaaca	cccagccatc	aggaccgta	aattctaagg	aagttccagc	actgacagca	120
gtggaacag	gtgcaaccag	tcaagtcacc	cctgaagatt	tgatcgaaac	caggcatgtt	180
attaacaata	gactaagatc	tgagtgcact	gtggaggcct	tctttggaag	gtctgcatgt	240
gttgccatcc	ttggtgtggt	aaacaaaaag	ccagacacca	caaagtccaa	agacctcttt	300

acaacatgga	ggatcactta	cctgcaaact	tatcaactga	ggaggaaact	cgaactcttc	360
acgtattcta	gatttgattt	ggaattaacg	tttgtcatta	cagaaagata	cttttcaggg	420
acagcagcca	caaccagaga	ttatgtttac	caaataatgt	atgtaccacc	aggagccccc	480
ataccaaata	cctggggacga	ctacacctgg	cagtcatcta	ccaacccctc	tgtcttctac	540
accacaggca	atgccagccc	acgcatgtct	ataccctttg	ttggtattgg	tgccgcctat	600
gctcactttt	atgacggggt	cagtgtggta	ccattcaatc	aaatagatgc	aggagcatcc	660
aacaaatatg	gctactcatc	aatcaaagac	tttggtacat	tggcagttag	aattgttaat	720
gagtttgatc	cagtgcacaat	agaggctaaa	gtcagagtgt	acatgaaacc	caaacatgtc	780
aggggtgtgt	gtccaagacc	acctcgtgca	gtaccatata	aaaactcatc	agttgatttc	840
gccccaaaacg	cagtagcaat	gaaccaagta	gccacaatta	ggacgtat		888

&lt;210&gt; 41

&lt;211&gt; 915

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; CA24, strain Joseph

&lt;400&gt; 41

ggtatcgaag	ataccattga	cactgtcatt	aacaatgccc	tacaactatc	tcaaccacag	60
ccaaataagc	agttgacagc	tcagtctacc	ccctccacaa	gtggagtaaa	ctcccaggag	120
gttccagctc	tgaccgctgt	ggaaaccggg	gcctcgggac	aagcagtgcc	cagtgatgtg	180
attgagacca	gacacgtggt	taattataag	acccgatctg	aatctactct	tgagtctttc	240
tttggaaggt	cagcttgtgt	caccataatt	gaggtcgaga	acttcaatgc	cactagtga	300
gcagacaaga	ggaaacagtt	caccacttgg	ccaatcacat	acaccaatac	cgtgcaattg	360
cgcaggaaac	tagaattctt	cacttactcc	aggtttgacc	tagagatgac	ctttgtagtg	420
acagaaagat	attatgccag	caacacaggt	cacgccagaa	accaagtgtg	tcaaataatg	480
tacattcctc	ctggtgcacc	acaaccacaa	gcatgggatg	attacacgtg	gcaaagctct	540
tcgaatccgt	cagtctttta	cacttatggg	agtgtccac	ccaggatgtc	tataccgtat	600
gtcggtatcg	caaatgcata	ctctcttttt	tatgatgggt	ttgcacgagt	accactgaag	660
gacgaaacag	cggactcagg	tgatactttt	tacgggctag	tcacatcaa	tgattttgga	720
accttagcaa	taagagtagt	gaatgaattt	aaccacagta	ggattacatc	aaaaattaga	780
gtgtatatga	aaccaaagca	tgtaagatgc	tggtgcocct	gaccaccacg	tgcagtgcga	840
taccgtgggtg	aaggagtaga	ttttaattca	agttcaatca	caccactaac	agcagtcgca	900
aacatcaaca	cattc					915

&lt;210&gt; 42

&lt;211&gt; 852

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; CB2, strain Ohio-1

&lt;400&gt; 42

agcccagtgg	aggaatccat	tgagagaagc	attggcagag	ttgctgacac	cattggtagt	60
ggaccatcca	attcggaggc	aataccggca	ctcacagcag	tagaaacagg	acacacatca	120
caggttacac	ctagtgcac	gatgcaaaca	agacatgtgc	acaactacca	ttcaaggtcc	180
gaatccagcg	tagagaactt	cctggcacgc	tcggcttggtg	tgttttatac	aacatacacc	240
aacggtaaaa	aaaaaaatgc	cgccaaagag	aagaagtttg	caacgtggaa	agtgagtgtt	300

```

agacaagccg cccaactaag aagaaagcta gagttattca cataacttaog ctgtgacatc 360
gaattaacat tcgtcatcac cagtgcacaa gatccatcga ccgctaccaa cttggatgtg 420
ccagtgttga cccatcaaat aatgtacgtc ccacctgggtg gtccagtccc tgaaaccgtg 480
gacgattaca actggc aaac atctacaaat cccagccttt tttggactga agggaatgca 540
cctccacgca tgtcaattcc attcatgagc ataggcaatg cctatagtat gttctatgat 600
ggttgggtccg agtttaggca tgacgggtgtg tacggcctga atacccttaa caatatgggc 660
acaatatatg ctaggcacgt caacgctgac aaccaggta gcacaccag cacagtgaga 720
atatacttca aacccaaaca tgtcaaggca tggattcctc gccgcctcg tttggcacag 780
tatcttaaag ccaataatgt gaattttgag atcaccgatg tgacagaaaa gagagatagt 840
ctcacgacca cg 852

```

<210> 43

<211> 846

<212> DNA

<213> Enterovirus

<220>

<221> misc\_feature

<222> (0)...(0)

<223> CB6, strain Schmitt

<400> 43

```

agcccagtg agggcgccat agagagagcc attgcaaggg tcgctgacac tatgccaagt 60
ggcccaacca attcagaagc agtgccctgcc ctgacagcag tggaaacggg ccacacctcc 120
caagtcgtcc ccagtataaa catgcaaac aggcacgtga agaagtacca ttcacgctcc 180
gaaaccagcg tcgagaactt tctgtgtagg tctgcatgtg tatattttac cacatataag 240
aaccagacag gggcgaaaaa tagatttgc tcttgggtaa tcaccacaag acaagtggcc 300
cagctcagga gaaaactaga aatgtttacg tacttgcgtt tcgacattga actcaccttt 360
gtcattacaa gtgcgcaaga ccaatccact atttcccaag acgcccctgt gcagacacat 420
cagataatgt acgtgccacc gggaggccca gtgccaaacca aagttgacga gtatgtgtgg 480
caaacatcca ccaacccag cgtcttttgg accgagggtg acgctccacc acgtatgtca 540
gttcccttta tgagtatcgg taatgcttat agcacatttt atgacgggtg gtctgatttt 600
tcaaacaaag gaatatatgg gttgaacacc ttgaacaaca tgggaacatt gtacatccgc 660
cacgttaacg ggcccaaccc agtaccatt accagcacag tgaggatata ctttaagccc 720
aagcatgtta aggcctgggt gcctaggcct ccaaggcttt gccagtacaa aacgtttagg 780
caagtcaact ttacagtgcac tggagtgcac gagagtaggg caaatataac caccatgaat 840
actaca 846

```

<210> 44

<211> 852

<212> DNA

<213> Enterovirus

<220>

<221> misc\_feature

<222> (0)...(0)

<223> E1, strain Farouk

<400> 44

```

ggtgatgtgc agaatgctgt cgaaggggct atggtcaggg tggcagatac agtgcaaact 60
tcagccacaa actcagagag ggtgcctaac ttgacagcag tagaaactgg tcacacttcg 120
caggtagtac ctggtgatac catgcagact agacatgtga tcaacaatca cgtgagggtca 180
gaatctacaa ttgagaactt ccttgccaga tcagcgtgtg ttttcttcct agagtacaag 240
acagggacca aagaggattc caatagcttc aacaattggg tgattacaac caggcgagtg 300
gctcaactac gtagaaaact ggaaatgttt acttacctac ggtttgacat ggaaatcacc 360

```

gtgggtcatta	caagctcgca	agatcagtct	acatcacaaa	accagaatgc	accagtgcta	420
acacaccaga	taatgtatgt	accaccagg	ggacccatac	ccataagcgt	ggatgattac	480
agctggcaaa	catccacca	ccccagtatc	ttttggaccg	aagggaaacgc	tccggcacgc	540
atgtcaattc	cattttattag	cataggcaat	gcgtatagta	atttctacga	tgggtgggtct	600
cacttctccc	agactggcgt	gtatggcttc	actactctga	acaacatggg	tcaattgttc	660
ttccggcacg	taaacaagcc	caaccagcc	gctattacaa	gtgtggcgcg	catttacttc	720
aaaccgaaac	atgtacgcgc	ttgggtgcct	agaccaccgc	gcttgtgtcc	atacatcaat	780
agcacgaatg	tcaactttga	acccaagcca	gtgactgaag	tacgtaccaa	cataataaca	840
acgggtgcct	tc					852

&lt;210&gt; 45

&lt;211&gt; 882

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; E2, strain Cornelis

&lt;400&gt; 45

ggagatgagg	tgaagcatga	acccacagtg	gccaacacaa	cagcaagtgg	accatcaaat	60
tcacaacaag	taccggcact	cacagcagtg	gagactgggc	acacctcaca	ggtgggtcca	120
agcgatacca	tacaaaccag	acatgttcac	aattaccata	gtagaactga	atccaccctg	180
gagaacttcc	tcggaagatc	agcatgcgtg	cacattgact	cgtataagac	caagggagtg	240
accggcgaga	gcacccggta	cgcacatcatg	gagatcacca	ctcgcgagat	ggtgcagctg	300
cggaggaagt	gtgaactctt	cacctacatg	cgatatgac	tagaaatcac	gtttgtgatt	360
acaagtcgcc	aggagcaagg	ggccaaactg	tcgcagaaca	tgccagtatt	aacacatcag	420
atcatgtatg	tcccaccggg	cgggcctata	ccaaccagca	acgagagtta	cgcttggcaa	480
acgtcaacga	acccaagcgt	gttttggaca	gaaggaagct	cgccaccacg	aatgtcaata	540
ccgtttgtta	gcataggaaa	cgcatacagc	aatttctatg	atgggtggtc	gcacttctca	600
caaaacggtg	cgtatggtta	cacggcacta	aacaagatgg	gtaggatatt	cgtgcgccat	660
gtaaacaag	agacaccact	gcaagtcata	agcacaatac	ggatgtatat	gaagcccaaa	720
cacgtgcggg	cttgggtgcc	aagaccacca	cgctgtgtgc	catacctgcg	ggcgggtgat	780
ataaactttg	aagtgactga	tgttacagaa	aaacgaaata	acatcaatta	tgtcccaacc	840
ccatcccaca	gcagcagtg	gcacatgcgc	ttgaacaacc	at		882

&lt;210&gt; 46

&lt;211&gt; 879

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; E3, strain Morrissey

&lt;400&gt; 46

ggggacgtcg	aagaggcaat	tgatagggca	gttgcgagg	tggtgacac	aatgccaaacc	60
ggtccacgaa	acactgagag	cgtgcctgcc	ctgacagcag	tagagacagg	ccacacctca	120
caggctggtc	ctggtgacac	aatgcagacg	aggcatgtta	agaactatca	ctccaggaca	180
gagtcacaa	ttgaaaactt	cctgtgcagg	gctgcgtgcg	tgtatataac	aacatacaaaa	240
tcagctgggtg	gaacacccac	agagcgatat	gcaagttgga	ggataaacac	caggcaaattg	300
gtgcagctca	ggaggaaatt	tgagctcttc	acataacttg	gctttgacat	ggaaatcaca	360
tttgtgatca	caagcacaca	agatcctggg	acacaattgg	cacaagatat	gcctgtacta	420

```

actcatcagc tcatgtatat cccacctggg ggccctgttc ctaacagtgc cacagatttt 480
gcatggcaat catcaactaa tccaagtata ttttggacgg aaggctgtgc tccagcacga 540
atgtcgggtgc cgttcatcag cattggcaat gcctacacca atttttacga tgggtgggtcg 600
catttcaccc aagaaggggt ttatgggttt aactcactga acaacatggg ccacatatat 660
gtgaggcacg tcaatgagca aagcctgggt gtctcgacca gcaccgttcg cgtgtatttt 720
aaacccaaac atgtgcgtgc ttgggtacca agaccacca gactgtgccc atacactaag 780
agttcaaagt tgaatttcaa accgaccgct gtcactgatg agcgaaagga tatcaacgat 840
gtaggcaccc ttcgaccaac agtgtacact aaccttgtg 879

```

<210> 47

<211> 843

<212> DNA

<213> Enterovirus

<220>

<221> misc\_feature

<222> (0)...(0)

<223> E4, strain Pesacek

<400> 47

```

ggagacgtgc aagatgcagt gacaggtgct atagtacgtg tcgctgacac tctcccaaca 60
ggtccctcaa ataatgaagc tatacccaat ttaacagcag tggagactgg ccatacctcg 120
caagtgcacac caggcgacac aatgcaaaac cgccatgtgg tgaacatgca caccgctct 180
gagtcgtcca tcgagaattt cctggcacgt tcagcatgcg tgtactacct tgattaccaa 240
acgggagaag ggcccggcga tcagtatttt ggccagtgga ccattaccac gaggagggtt 300
gcgcaattgc gtcgaaagct ggagatgttc acttatctaa gatttgacat ggaaatcaca 360
atcgtgatta ctagttcaca ggatcaatct accatctcga acccagatac accagttttg 420
acgcacaaaa ttatgtatgt accaccagga ggaccaatcc cagcaaaaagt cgatgattac 480
agttggcaaa catccacgaa tcccagcgta ttctggactg aagggaatgc gcctgcccgr 540
atatccatcc cattcattag cgttggaaat gcatacagta gcttttatga cgggtgggtcg 600
aacttctcac aaaacgggcg gtatggctac aataccctca acaacatggg acaattgttc 660
tttaggcacg ttaacaaacc cagccctaact actgtcacia gcgtcgcccc catatacttc 720
aagcctaagc acgtgagagc ttggatcccg cgaccacgc gggtgtgtcc atacataaat 780
gcgggagacg tgaacttcac tccgacacca gtgactgaaa agcgaaagga cctaataacc 840
acg 843

```

<210> 48

<211> 843

<212> DNA

<213> Enterovirus

<220>

<221> misc\_feature

<222> (0)...(0)

<223> E4, strain DuToit

<400> 48

```

ggagatgtgc aggacgcagt ggctggggcc atagtgcgtg tggctaatac tctcccatca 60
ggccctcaa acaatgagc tatacccaac ttaacagccg tagaaactgg acacacctcg 120
caggtgcacac cgggtgatac aatgcagacg cgccacgtag tgaacatgca cactcgttct 180
gagtcgtcaa tcgagaactt cctggcgcggt tcagcatgtg tatactacct cgattaccga 240
acaggaacgg ggccctggcaa tcaatacttt agccagtgga ctattaccac aagacgagtt 300
gcgagctgc gtcgaaaatt ggagatgttc acctatctaa gggtcgacat ggagatcacg 360
attgtaataa cgagttcaca agatcagcct accgtccgaa acccagacac accggctctg 420
acacacaaaa tcatgtatgt gccaccagga gggccaatcc cagcaaaggt cgacgattac 480

```

tggtggcaaa	catccacaaa	ccccagtgtc	ttctggactg	aagggaaacgc	accagcccgg	540
atatccatcc	cgttcatcag	tgtcgggaat	gcatatagta	gtttctacga	tggatgggtca	600
aatttctcgc	aaaatgggcg	gtatgggtac	aacaccctga	acaacatggg	gcaattgttt	660
ttcaggcatg	tcaataaacc	cagtcccaac	actgtcacaa	gtgttgcccg	catatacttc	720
aagcccaaac	acgtgaaggc	atgggtcccg	cgaccaccgc	gattgtgccc	ttacattaat	780
gctggagatg	taaatttcac	ccccacatcg	gtcactgaga	agcgagcgag	cctgataacc	840
aca						843

&lt;210&gt; 49

&lt;211&gt; 843

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; E4, strain Shropshire

&lt;400&gt; 49

ggggacgtgc	aagatgccgt	gactggagcc	atagtgcgtg	tgcgcgacac	actgcacacg	60
ggaccctcga	acaacgaagc	aatacccaat	ttgacggccg	tggaaacagg	gcatacatcg	120
caagtgcac	caggcgatac	aatgcagacg	cgtcacgtgg	tcaacatgca	cacccgttca	180
gagtcatcaa	ttgagaactt	cctagctcga	tctgcgtgtg	tgtattacct	cgactatcaa	240
acagggtcag	gacctggcac	ccaatacttc	ggccagtgga	ccatctccac	aaggagagtt	300
gcgcaactgc	gccggaagtt	ggaaatgttc	acctacctaa	gatttgacat	ggaaataaca	360
atcgtgatca	ccagttcgca	agatcactcc	accatctcaa	atccagatac	accaatcatg	420
acgcaccaaa	ttatgtacgt	accaccaggg	ggccaatcc	cggcgaaggc	cgacgactat	480
agctggcaaa	catctacaaa	ccctagtgtg	ttttggacag	aagggaaacgc	acccgcccg	540
atatccattc	cattcattag	tgtcggaaat	gcctatagca	gcttctacga	cgggtgggtca	600
aatttctcgc	aaaacggccg	atatggatac	aacactttga	acaacatggg	acaactattc	660
ttcagacacg	tgaataagcc	cagccccaac	accttcacaa	gtgttgcccg	tgtatacttc	720
aagccaaaac	acgtgaaggc	gtggattcca	cgaccaccgc	gattatgtcc	atacataaat	780
gcgggagacg	tgaatttcaa	accaacaccc	gtgaccgaaa	agagggcgag	cttaatcacc	840
aca						843

&lt;210&gt; 50

&lt;211&gt; 876

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; E5, strain Noyce

&lt;400&gt; 50

ggagactcag	agcacgcagt	ggaaagcgcc	gtatctaggg	tggcagatac	aattatgagt	60
ggcccgctca	actcccaaca	ggccccgct	cttactgcag	ttgaaactgg	acacacatcg	120
caagttgttc	caagtgatac	catccaaacc	agacatgtgc	agaatttcca	ctctaggtcc	180
gagtcgacca	ttgaaaattt	cctgagtagg	tcagcatgtg	tgcatatcgc	caattacaac	240
gcgaagggcg	ataagacgga	tgtggacagg	tttgacaggt	gggagatcaa	cattcgtgaa	300
atggtgcaac	tacgtaaaaa	gtgtgagatg	ttcacatatc	tacgctatga	tattgaagtt	360
acatttggtt	taaccagcaa	acaggatcag	ggcccaaac	taaaccagga	tatgcctggt	420
cttaccacc	aaattatgta	cgtaccccca	ggaggttcag	tacctagcac	cgttgagagc	480
tatgcgtggc	aaacatcaac	aaaccctagc	gtgttttgga	ccgaggggaa	cgctccagct	540

agaatgtcca	taccctttat	cagcataggg	aacgcttata	gtagcttcta	tgatggatgg	600
tcacacttta	ctcaaaaagg	ggtctacgga	tacaacacat	taaacaagat	ggggcagcta	660
tttgtcagac	atgtgaacaa	acagaccccc	acgccagtta	ctagtaccat	aagggtttac	720
ttcaaaccaa	agcacattag	agcttgggtc	cctaggcccc	cgcggttatg	cccctatgtg	780
aacaagacaa	atgtaaactt	catcaccaca	caggtaacag	aacctacaaa	tgacctcaat	840
gacgtgcccc	agtctgagca	taacatgcac	acatat			876

&lt;210&gt; 51

&lt;211&gt; 867

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; E6, strain D'Amori

&lt;400&gt; 51

aacgacgttc	agaacgcggt	ggaacgggtca	attgttcggtg	tagcggacac	attacccagt	60
gggccaagca	actcagaaag	cataccagca	ctcacagcag	ccgagactgg	acatacctcg	120
caggtcgtcc	ccagcgacac	catccagacg	cgacatgtga	ggaattttca	cgttcgggtct	180
gagtcacg	tagagaattt	tcttagcagg	tcagcttgcg	tgtacatcgt	ggagtacaaa	240
acccgggaca	cgactcccga	caagatgtat	gatagctgga	ttatcaatac	caaacaagtg	300
gcgcagttga	gaaggaagct	ggagttcttt	acctatgtca	gattcgacgt	ggaagttacc	360
tttgtcataa	ccagcgtgca	agatgactcc	acaaaacgga	acaccgacac	cccagtgcata	420
actcatcaaa	ttatgtatgt	gccgccagga	ggggccatac	cacaagcggg	ggacgattat	480
aactggcaaa	cttccaccaa	ccccagcgta	ttttggactg	aggggaacgc	gccaccaagg	540
atgtctattc	cgttcatgag	tggtggcaat	gcatacagta	acttctacga	cgggtgggtcc	600
cacttttctc	aaactggggg	ttacgggttt	aacaccctaa	acaacatggg	taagttatat	660
ttcaggcatg	taaacgacag	gactattagc	ccaatcaaaa	gtaagggtcag	aatatatattc	720
aaaccacaaa	acgtgaaggc	atgggtaccc	agaccgccga	gattgtgtga	atacaccac	780
aaggataacg	tggactatga	accaaagggg	gtcacaacat	cacgcacttc	aatcaccatc	840
accaactcca	cacacatgga	gacgcac				867

&lt;210&gt; 52

&lt;211&gt; 867

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; E6, strain Cox

&lt;400&gt; 52

aatgacgttc	aaaatgcagt	cgagcaatca	attgttcggtg	tggctgacac	gttaccacagt	60
ggaccagcta	attcagagag	cataccggca	ctgacggccg	ccgagactgg	ccatacttct	120
caagttgtgc	ccagtgatac	tatacagaca	cgccacgtaa	aaaactttca	tgtgaggtcg	180
gagtcgctcag	tagagaactt	tctcagtagg	tccgcttgcg	tgtatatagt	gggatacaag	240
accacagatg	cgaccctga	caaaatgtat	gacagctggg	ttatcaacac	aaggcaggtg	300
gcgcagctaa	ggagaaaatt	agagttcttc	acctatgtta	ggtttgatgt	tgaggtcacc	360
tttgtgataa	caagcgtgca	agacgattca	actagacgga	acacagacac	ccccgttcta	420
accacacaaa	tcatgtacgt	acccccaggt	gggcccattc	cgcaggcagt	ggacgactac	480
aattggcaaa	cttccacaaa	tcccagtgtg	ttttggacag	aagggaatgc	cccaccaaga	540

atgtccatac	cattcatgag	cgtaggtaac	gcatacagca	atttctatga	tgggtggtct	600
cacttctctc	aaactggggt	gtacgggttc	aacaccctga	acaacatggg	caagctatac	660
ttcaggcatg	tgaacggcaa	gacaataagc	cctatcgcaa	gcaaggttag	gatttacttc	720
aaaccaaagc	atgtgaaggc	atgggtgccc	agaccaccgc	gattgtgtga	atacaccac	780
aaggacaatg	tggattacga	accaaaggga	gtcacaacat	cccgtacatc	tatcacaatt	840
agcaattcca	ctcatatgga	aacatat				867

&lt;210&gt; 53

&lt;211&gt; 867

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; E6, strain Burgess

&lt;400&gt; 53

aacgacgttc	agaacgcggt	ggaacgggtca	attgttcgtg	tagcggacac	attacccagt	60
gggccaagca	actcagaaag	cataccagca	ctcacagcag	ctgagactgg	acatacctcg	120
caggctcgtc	ccagcgacac	catccagacg	cgacatgtga	agaattttca	cgttcgggtct	180
gagtcacg	tagagaattt	tcttagcagg	tcagcttgcg	tgtacatcgt	ggagtacaaa	240
acccatgaca	cgactcccga	cgagatgtat	gatagctgga	ttatcaatac	cagacaagtg	300
gcgcagttga	gaaggaagct	ggagttcttt	acctatgtca	gattcgacgt	ggaagttacc	360
tttgtcataa	ccagcgtgca	agatgactcc	acaagacaga	acaccgacac	cccagtgcta	420
actcatcaaa	ttatgtatgt	gccgccagga	gggcccatac	cacaagcggg	ggacgattat	480
aactggcaaa	cttccaccaa	ccccagcgta	ttttggactg	aggggaacgc	gccaccaagg	540
atgtctattc	cgttcctgag	tgttggcaat	gcatacagca	acttctacga	cgggtggtcc	600
cacttttctc	aaactggggt	ttacggggtt	aacaccctaa	acaacatggg	taagttatat	660
ttcaggcatg	taaacgacag	gactattagc	ccaatcacia	gcaaggtcag	aatatatattc	720
aaacccaac	acgtgaaggc	atgggtaccc	agaccgccga	gattgtgtga	gtacaccac	780
aaggataacg	tggactatga	accaaagggg	gtcacaacat	cacgcacttc	aatcaccatc	840
accaactcca	cacacatgga	gacgcac				867

&lt;210&gt; 54

&lt;211&gt; 876

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; E7, strain Wallace

&lt;400&gt; 54

ggcgacaccg	aaacggctat	tgacaatgca	atcgccaggg	tagcagatac	ggtggcgagc	60
ggtcctagta	attcgaccag	tatcccagca	ctcacagcag	ttgagacagg	tcacacgtca	120
caagtcgagc	ccagcgatac	agtgcacaa	agacatgtca	aaaactacca	ctcgcgttct	180
gagtcacaccg	tggaaaactt	tctaagtcgc	tccgcttggtg	tgtacatcga	agagtactac	240
accaaggacc	aagacaatgt	taataggtag	atgtcgtgga	caataaatgc	cagaagaatg	300
gtgcaattga	ggagaaagtt	tgagctgttt	acatacatga	gatttgatat	ggaaatcacg	360
tttgtaatca	caagtagaca	actacctggg	actagcatag	cacaagatat	gccgccactc	420
accaccagga	tcatgtacat	accaccaggt	ggcccgggtac	caaacagcgt	aacagatttt	480
gcgtggcaga	catcaacaaa	ccccagtatt	ttctggacag	aaggaaacgc	gccacctcgc	540
atgtctattc	cattcatcag	tattggcaat	gcatatagca	acttctatga	cgggtggtca	600



cacttttccc	aaaacggtgt	gtacggatac	aacgccctga	acaacatggg	caagctgtac	660
gcacgtcatg	ttaacaagga	cacaccatac	cagatgtcaa	gcacaatccg	agtgtatttc	720
aaacccaagc	acatccgagt	atgggtccca	cggccgcctc	gactgagccc	gtacatcaaa	780
tcaagtaatg	taaattttta	ccccacgaac	ctgacggacg	agcggtcatc	catcacatat	840
gtgcccgcga	ctatacgtcc	agatgtgcgc	accaa			876

&lt;210&gt; 55

&lt;211&gt; 843

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; E8, strain Bryson

&lt;400&gt; 55

ggtgatgtcc	agaatgcagt	tgagggggca	atgggttagag	ttgcagatac	cgtgagcact	60
agcgccacca	actccgaaca	agtgccgaac	ctgaccgcgg	tggagaccgg	tcacacatcg	120
caggtagtgc	ccggcgacac	tatgcagacc	aggcacgtag	tgaacaagca	tgtgcatct	180
gaatctacaa	ttgaaaattt	cctcgcacgt	tcagcctgtg	tgtactttct	tgagtacaag	240
actggtacca	agactgactc	caacgccttc	agcaattggg	tcatacaaac	gcgcaagggt	300
gcgcagctga	ggcgcaagtt	ggagatgttt	acatacttaa	ggtttgatat	ggagattact	360
gtgggtcatta	ctagctccca	agaccagtcc	acatacaciaa	atcaaaatgc	gcccgtcctg	420
actcaccaga	ttatgtatgt	accacctggg	ggcccagtgc	ccactagcgt	tgatgattat	480
tgttggaaca	catccacaaa	cccaagcata	ttttggacgg	aaggaaacgc	acctgccaga	540
atgtccatcc	cctttatcag	cattggaaat	gcttatagca	acttttatga	tgggtgggtca	600
cattttctcac	agaacggagt	ctatgggttt	accaccttaa	acaacatggg	ccagctgttt	660
tttaggcata	ttaacaagcc	taaccggcg	acaataacca	gtgtggcccg	cattttacttc	720
aagccaaaac	atgtgagggc	ctgggtgcct	agaccgccac	ggttgtgccc	ttacatcaac	780
agtagcaacg	tgaacttcga	cccaaacct	gtggcagagg	tcaggtctag	catcatcacc	840
acc						843

&lt;210&gt; 56

&lt;211&gt; 876

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; E11, strain Silva

&lt;400&gt; 56

ggtgatgtgg	ttgaagccat	tgagggcgca	ggtgctagag	tagcagacac	tatcagcagc	60
ggcccaacaa	attctcaagc	agtcccagca	ctcacagcgg	tggagactgg	acacacctcg	120
caagttgtac	caggtgatac	catgcagacc	agacacgtaa	agaattacca	ctcacgatca	180
gaatcgacca	ttgaaaattt	tctgagtagg	gcggcttggt	tctacatggg	tgagtattac	240
actacaaata	cagatgagac	caagagattt	gctaattgga	caatcagcgc	aaggcgcatg	300
gtacaaatga	ggaggaagct	tgaaatgttc	acgtacgtcc	gtttcgacgt	ggaggtgaca	360
ttcgtaatta	ccagcaaaac	ggaccaaggg	aatcggttgg	gacaagatat	gccccgcctc	420
acacaccaga	taatgtacat	cccggcaggt	ggtcgtatac	ccaaatccac	cacagattac	480
gcatggcaaa	cgtcgacaaa	ccccagcatc	ttttggacgg	agggtaacgc	gccccccagg	540
atgtccattc	ctttcatgag	cattggaaac	gcatatagca	atttttatga	cggttgggtct	600
cactttcttc	aaaatggcgt	gtacggatat	aacacactaa	accacatggg	tcaattatac	660

atgcgccatg	taaatggacg	atcacctctt	ccaatgacca	gcacgggtgag	ggtgtacttc	720
aaacccaaac	atgtgaaaac	atgggtgcca	cgacccccaa	gattgtgcca	atacaaaaac	780
gcctcgacag	taaacttttc	accacaaaac	atcacagaca	agaggggatag	catcacttac	840
attccagaca	ccgtgaaacc	cgacatgaca	acatat			876

<210> 57  
 <211> 861  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E13, strain Del Carmen

<400> 57						
gggggatgaga	gtgcaaaggc	tacagtttcc	aacacacagc	ctagcgggtcc	aagtaattct	60
gtcagcgtgc	caatgcttac	tgctgctgag	accgggcaca	catctcaagc	agtacccagt	120
gacactatac	agaccaggtg	cgtagtgaac	caacacaagc	ggtcggaatc	atccgtggaa	180
aatttctgt	gtcgctccgc	ttgcgtatac	tacacaacct	atgacactca	cggggatgca	240
gccgacgcaa	agtacgccag	ttggacgata	accacccgaa	aagctgcaca	gctgcggaga	300
aaactagaga	tgttcacata	cttgaggttt	gatttagaag	tgacattcgt	tataacaagt	360
gcacaagtaa	catctaccaa	taaacgtcag	gacacgcctg	ttctcacgca	tcaagtcag	420
tacgtgccac	caggtgggtg	agtacccgct	agtgtggacg	attatgcgtg	gcagacgtcc	480
acaaacccaa	gtatcttctg	gacggaaggg	aatgcaccag	cacgcattgc	tatacccttt	540
atcagcgtgg	gcaacgcata	cagtagcttc	tatgatgggt	ggtccaactt	tacacagaat	600
ggagtttacg	ggttcaacac	gctaaacaac	atgggaaagc	tatacgtacg	acacgtcaat	660
ggagctagcc	ccggccctgt	gaagagtacc	atacggtttt	acatgaagcc	caaacacgtg	720
aaggcttgga	taccagagcc	tcctcgcttc	tgcgagtacg	aaaaatcagg	caatgtaaac	780
ttcaaaccga	agggcgtgac	agagagccgg	acgtctatca	aattagaaaa	accaaaccct	840
cggtcctaat	taatgaacca	c				861

<210> 58  
 <211> 894  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E14, strain Tow

<400> 58						
aatgatccag	agcaagctat	aaatcggggc	ctagcagagg	tggcagacac	agttcgtagt	60
gggcccgtcta	actctgaaca	aattcccgcg	ctgacagccg	tggagacagg	gcatacatca	120
caagtgcgtcc	ccagtgcacac	aatgcaaacc	cggcatgtga	agaattacca	ctccaggtca	180
gagtcaacaa	tagagaactt	tttgtgtaga	tcggcttgcg	tgacatcgc	aacatacaag	240
gctaaaggcg	gagctggaga	cgtcgaccgg	tacgacagct	gggacataaa	cataaaaagag	300
ctggttacagt	tgcgacgcaa	gtgcgagatg	tttacgtacc	taaggtttga	tatggagggtc	360
acctttgtga	ttaccagcat	acaggagcag	ggcaaagcac	tgacccagga	catgccggtg	420
ctaacgcacc	aaataatgta	cgttccaccg	ggcgggtgcc	tgcttagtgg	tgcaaaaagc	480
tttgcggtgg	agtcacaaac	gaatcccagt	gtgttctgga	cagaaggcaa	tgaccagca	540
cgtatgtcta	taccctttat	aagtattggg	aacgcttaca	gtaatttcta	tgatgggtgg	600
tcccacttta	cccagaacgg	tggttacggg	tacaacacac	taaacaaaact	gggtaagatc	660
tacgtcaggc	atgtgaacaa	acaaaccccc	acggatgtca	ccagcaccgt	gcgaatttac	720

```

ttcaagccca aacacgtgcg agcttgggtg cctcgcccg ctagactatg tccttataag 780
aacaaggcaa atgtaaactt tgaagttact agtgtaacca ctgccagaac gagtcttaat 840
gatgtcccca ctcccaacca cagtagtagc gtgcacctgc gcatgcacac gcac 894

```

```

<210> 59
<211> 882
<212> DNA
<213> Enterovirus

```

```

<220>
<221> misc_feature
<222> (0)...(0)
<223> E15, strain CH96-51

```

```

<400> 59
ggtgatgacc aacacaagac caatacagtg acagacacag agcagagtgg cccgtcaaat 60
tccgaacgcg tcccagccct cacagcagtg gagactggcc acacttcgca ggctcgtaacc 120
agcgacacag tgcaaactcg ccacgtacgc aattaccact caaggacaga gtctacctta 180
gagaattttc ttggtaggtc agcatgtgtg cacatcgaca catacaaggc taaggggtgaa 240
aaaggatctt ctgagaggta cgcgtcatgg gagataacta acagggagat ggtgcaattg 300
cgccgaaaat gtgagatgtt cacatatatg aggtatgacg tggaaataac atttgtgata 360
accagctacc aggagcaggg cacacgattg gcccaggaca tgcctgtact aacacaccaa 420
atcatgtacg tgcccccggg tgggcctgtg ccaacaagca cggagagcta tgcattggcag 480
acctcaacga accctagcgt cttttggact gagggcaacg caccaccgcg tatttcata 540
cccttcatca gcataggaaa tgcgtactgc aacttttatg atgggtgggc acatttctca 600
caagatgggt cctatggcta cacagcgctc aatagaatgg ggaaaatata tattagacat 660
gtaaataagg agacccccac acaggtcatt agtaccgtga ggatgtacat gaaacaaaaa 720
cacattcgcg catgggtgcc cagaccccc cggctgtgca aataoctaca ctcaggcaac 780
atgaacttca acgtggagga cattacagag gageggaacg atataaacca tgtaccacc 840
cccagccaca gcagtagtgt gcgtgtgcgt cttggcacca ca 882

```

```

<210> 60
<211> 867
<212> DNA
<213> Enterovirus

```

```

<220>
<221> misc_feature
<222> (0)...(0)
<223> E17, strain CHHE-29

```

```

<400> 60
ggtgatgttg aggactcagt aaacagagca gtggttaggg tagcagacac catgccaaagt 60
ggaccatcca attcgcaggc agtacctgcc ttgacagccg ctgagacagg tcacacgtct 120
caagtgggtgc ctggtgataa catccaaaca cgtcatgtgc acaactacca ctccagaact 180
gaatccagta tcgaaaattt cttcgggcgt tccgcatgtg tagtgggtcaa aacatataaa 240
atgggtcaaa aagttgtagc tacagacaga tatgatagtt ggatgatttc cattagggac 300
atggtacaac taagacggaa gtgtgaaatg ttcacgtaca tgagatttga tttagagatc 360
accttcgtgg tcacgagtta ccaacaatat agtacatcct tgacacagga catgccagt 420
atcacgcac agttcatgta tgtgccgcct ggggggtccg ttcctgagag tgtaaatagc 480
tacgcttggc aaacgtcaac caatcccagt atattctgga ctgagggtaa tgccccagca 540
aggatgtcca ttcccttcat cagtgttggg aacgcatata gctgcttcta cgatggctgg 600
tcacacttca cacagaaggg ggtttatggt tataacactc tcaacaacat gggcaaattg 660
tacatgcgac acgtgaacaa aaatagcccc acagagatca taagcactct tcgtgtgtat 720
ttcaagccaa agcacgtgaa agcgtgggta cccagaccac ccaggctatg tccatacaaa 780

```

tataaggcaa atgttgactt tgaagtgact ccaatcacag acaagcgaga ctccataacc 840  
agcataccag tccccaagca cactcat 867

<210> 61  
<211> 861  
<212> DNA  
<213> Enterovirus

<220>  
<221> misc\_feature  
<222> (0)...(0)  
<223> E18, strain Metcalf

<400> 61  
ggggataacc aggatcggac ggtcgccaac acacagccta gcggtccgtc caactccacg 60  
gaaattccag ccttaacagc ggtggaaacg gggcacacct cacaagtgga tcccagtgac 120  
actatccaga ccaggcacgt ggtaaaacttc cactcacgtt ctgagtcac tatagaaaat 180  
ttcatggggc gtgcagcatg tgtgttcatg gatcagtata aaatcaatgg agaagagacg 240  
tccactgata ggttcgcagt gtggaccata aacataaggg agatggccca attaagaagg 300  
aagtgtgaaa tgttcacgta catgcgtttt gatatcgaga tgacaatggc cattaccagc 360  
tgtcaagacc aggggaacgat actagatcag gacatgcctg ttttgacgca tcaaattatg 420  
tacgtccac cagggggccc aatcccagcc aaagtagata gttacgagtg gcagacatca 480  
acaaacccca gcgtcttctg gacggaaggt aatgcaccac cgcgtatgtc tattccattc 540  
attagcgtcg gcaatgctta tagctcattt tacgatgggt ggtcacactt cacacaggac 600  
ggtacctatg ggtatacaac ccttaatgca atggggaaac tgtacattag gcatgtgaat 660  
aggagcagcc ctcatcagat aaccagcacg atcagagtat acttcaaacc caaacacatc 720  
aaggcatggg tgccccgacc accacgattg tgcccgtata taaacaaaag ggacgtaaac 780  
ttttagtca cggagataac agactcaagg acttccatca ctgatacacc acaccagaa 840  
catagtgtcc tggcaacgca t 861

<210> 62  
<211> 879  
<212> DNA  
<213> Enterovirus

<220>  
<221> misc\_feature  
<222> (0)...(0)  
<223> E19, strain Burke

<400> 62  
ggagacatcg tggaggctgt ggagggagcc atctcgcgag tggcagatac tgtagtagt 60  
ggggcccagta actctcaagc agtaccagcc ctacacagcag tcgaaacggg tcacacttct 120  
caagtcaatc ctagtgacac catgcagacc agacacgtga caaattacca ctgcgggtca 180  
gaatccagca tagaaaattt ccttagccgc tctgcttggtg tgtatatggg cgaatacagc 240  
acacaagcat cagatgagac caaaaagtac atgtcatgga ccataagccc aaggaggatg 300  
gttcaaatgc gcaggaagtt tgagctcttc acttacctgc gttttgatgt ggagattact 360  
tttghtaatca ccagcagaca agtcaaggta gggacacaat taggccaaga tgcccccccg 420  
ctaactcacc aagtcattgta tataccccca ggaggcccag tacctgattc agttggtgat 480  
tacgcatggc agacttccac taaccctagt atcttttgga ccgaaggtaa tgcacacccc 540  
aggatgtcaa tacccttcat tagcataggt aacgcctata gcaactttta tgacgggtgg 600  
tcgcattttc accagaatgg cgtctatgga tacaacacgc tgaaccatat ggggcaactg 660  
tacgtgctggc atgttaacgg cccttcacca ttaccagtga caagcacagt cagggtctac 720  
tttaaaccce aacacgtgaa ggcttgggta ccgagggcac ccaggctatg tcaatatgta 780  
aatgcatcca ctgtgaactt cgagccaaca gacatcactg agtcacgcac tgacatcaac 840

catgttccag acaccgtgaa gccagatctc caaacatac

879

<210> 63  
 <211> 843  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E20, strain JV-1

<400> 63  
 ggggacgtgc acgatgcggt ggttggggcc atgacccgtg ttgcagacac gataagtagt 60  
 gggccaagca attcagaaag cgtgccagca ttgactgcag ccgagacagg acacacatca 120  
 caggtagtac cgagtgatac catgcagacc agacatgtgc ggaatttcca cacaagatca 180  
 gagtcttcaa tagaaaattt catgagtcgc tccgcctgtg tctactatac taagtataag 240  
 accaaagacc cggacccaac ggagatgtac tctagttgga aggttaccac caggcaagtg 300  
 gcacaactca ggaggaagat ggagatgttc acttatttgc gctttgacgt agaagtgaca 360  
 tttgtaataa ctagctcgca agatcagtc acgagtgttg cacaggacgc acctgttctc 420  
 actcacaaa tcatgtacat cccacccgga ggcccgggtc ccaaatacagg tagggattac 480  
 tcatggcaat cctgtactaa cccaagtgtt ttctggactg agggtaatgc accaccacgc 540  
 atgtgtattc cgttcattag tattggaggg gcatatagtt cattctatga cgggtggtcc 600  
 cactttaacc aacaagggtc gtacgggtat aacactctca atgacatggg tcaactgtat 660  
 tttaggcatg tgaacgaggg tagcccaggg gcggtaacaa gctacatcag aatatacttc 720  
 aaacctaacc atattagagc atgggtgccc agaccaccta gattgtgtca gtatgagaaa 780  
 caagggagcg ttgacttcaa ggtgcagggg gtaactgatg ctcgtaacct gctcaccact 840  
 aca 843

<210> 64  
 <211> 885  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E21, strain Farina

<400> 64  
 aatgacccag cacaagccgt gttgagtgcg atcggtcgtg tcgctgacac cgtcgttagc 60  
 gggccatcga attcagagag agttccagtt ctaaccgctg cggagacagg tcataacctca 120  
 caggtaggtc ccagcgatac cattcagacg cgccacgtcg tcaacttcca cacaagatcg 180  
 gagtcaacaa ttgaaaattt tatgtgtcgc tccgcctgcg tgtacatcgc ccggtacggg 240  
 actgaaaagc aaggggaaca aatatccaga tacaccaagt ggaagatcac cactaggcag 300  
 gtggcgcaac tgcgcaggaa gatggagatg ttcacataca tgcgatttga tttggaaatg 360  
 acatttgtaa tcacaagctc ccagcgtatg tcaacggcat atgattcaga cacaccagcc 420  
 ctcacccacc aaataatgta cgtgccacct gggggcccgagg agccccgtca ttatgaggat 480  
 ttgcgctggc agacatccac aaatccaagc atatttttga ccgaaggtaa cgcaccacca 540  
 cgctttatcaa tcccatattat gagtgtggga aatgcctatt gcaattttta tgatgggtgg 600  
 tctcactttt cacaagtggt agtgtatggg tttaccacct taaataacat gggacaactg 660  
 ttcattgcgc atgtcaataa gtcaacagcg caccctcattg atagtgtggg gcgagtttat 720  
 tttaaaccaa agcatgttaa ggcgtgggtt ccaagacctc cccggttggtg cccatacatc 780  
 tatgcaagga acgtggattt tgagccacaa ggtgtcactg aatcaagaga aaagataaca 840  
 ctagataggg atactcacac ccctatgcgc acatgcgggc cgttc 885

<210> 65  
 <211> 882  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E24, strain De Camp

```

<400> 65
ggagatgtct gtgaggaagt agagagggct attgtcaggg ttgcagatac tgtcggacgc      60
ggtcctgcta acactgagag tgtaccagcg ctgactgcag ttgaaactgg acacacttca      120
caagttgtac ccggggacac catgcaaacc agacatgtta aaaactttca cacgcggtca      180
gaatcatctg tggaaaattt catgtgcaga gcagcgtgtg tgtattatgt ggattaccac      240
acacaaaatg acagtgagga tgaaaaatat gcaccttgga ttatcaacac gagacaggta      300
gcacagctac gcaggaaaat tgagctgttc acatacacta ggtttgatgt cgaaatcaca      360
ttcgtgatca ccaccacaca gcagcaatcc acagctccca accccgacac tcctctgctg      420
acacacaaaa tcatgtatgt gccccgggt ggcccagtc caaatagtgc taccgattat      480
tgttggcaat catccacaaa tcccagata ttctggaccg agggtagcgc accacccaaa      540
atgtcaatac cttttataag tgtgggaaat gcatacagca gtttttatga tgggtggtca      600
catttcactc aaaacggggt gtacgggttc aacactctga acaatatggg caaattatac      660
ttcaggcacg taaatgacaa caccgtaggg ccatatgtga gcaaagcccg catttatttc      720
aaaccaaagc atgtgcgtgc gtgggttccc aaacctccca ggctctgtga atacaacaat      780
cgagccaacg tgaactttga accacgaggg gttaccgatg ccaggtctag tatcacggcc      840
acaaccgaca cgatcactga gagcacaggg atgcaaacga ct                               882

```

<210> 66  
 <211> 876  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E25, strain JV-4

```

<400> 66
aatgatccag caactgccat agttagatcg gttgagagag tggtctgatac catagcaagt      60
ggacccacta actcagagag agtgccagca ctaaccgccg ttgaaacagg tcacacctca      120
caggtagtcc cgagcgacac catgcaaact aggcatgttg tgaaccatca cattagatca      180
gagtcctcta ttgaaaactt cctgagcagg tccgcctgcg tgtacatcga catgtatggg      240
acaaaagaga atgggtgacat caagcgcttc accaactgga gaataaacac acgtcaggtc      300
gtgcagctaa ggcgcaagct ggaaatgttt acatacatta gatttgatgt tgaaatcact      360
tttgtaatca ctagcacaca gggaacaccg actcaaaaga acaaggatac cccagttctt      420
acacacaaaa tcatgtatgt gccaccaggg ggcccaatcc ctgtatctta tgaagattat      480
tcttggcaga cctctacaaa tcctagtgtt ttctggacag aagggaatgc cccagcccgt      540
atgtcaattc ccttcagag cgtagggaac gcctattgta acttttacga cgggtggtca      600
cacttctcac aatcgggtgt gtatgggttc actacactca ataacatggg tcagttgtac      660
tttcgacacg tgaacaagga cacccttgga ccatacaata gcacggttcg ggtttacttc      720
aaacccaaac atgtgaaggc atgggtaccc agaccaccgc gcctgtgcga ctacgtttac      780
gcacataatg ttgacttcac accaaaaggg gttactgaca gcagggacaa gatcacccctg      840
gaccgtgatg aacacgtgcc gtcagtgggt aaccac                               876

```

<210> 67

<211> 870  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E26, strain Coronel

```

<400> 67
ggagatgatc caccgcattc gatctcaaac acggttgcaa acaccaaccc tagtgggtcca      60
accaactcag aaaggatccc agcgctcaca gcagcggaaa ctggtcacac ctgcgagggtg      120
gtcccagagt ataccgtaca aactcgttgt gtgaaaaact tccacactcg atcggagtca      180
tcaattgaga actttttgtg cagatcagct tgcgcacaca tgatcatcgt tgaggccttc      240
ccaacaacaa cacaagacgg tacacaaagg ttcgccaatt ggacgattag tgtgaaagac      300
atggtgcagt tgaggaggaa atgtgagatg ttcacgtact taagatttga catggagggtg      360
acttttgtga taactagtgt gatcgaaact acaaaaggga aagtaccggc accagcagtc      420
acacaccaag taatgtacat tccaccaggc ggacctattc cagctagcgt tgaaagttat      480
gcctggcaaa catccaccaa cccaagcgtg ttttgacag aagggaatgc tccccacgc      540
atgtctatac catttatcgg cattggtaat gcctacagca tgttctatga cggatggggcc      600
agtttcagac aatcgggtgg atatggatac agcaccctga accacatggg ccagatatcc      660
gtaagacacg tgaatgcaac cataccaaac ttgatcagca cagtcaggat atatttcaag      720
cccaagcacg ttagggcttg gattcctaga ccgcccaggg tgtgtcagta catttacaag      780
gcaaattgtg actacgcagt gtcaaatatc actgaaaagc gagatagtat aagatggaca      840
ccaacaaccg gtccgtcaat gacatcccac

```

<210> 68  
 <211> 855  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E27, strain Bacon

```

<400> 68
ggtgacgacg caaggactgt tagcgacaca caaaagagcc agccatctaa ctctgagcaa      60
gtgcctgcct taacagcggg tgagactgga cacacctctc aagttgagcc cagtataca      120
gtacagacac gacatgttgt caactcacac agtaggacag agtcgacaat tgagaatttc      180
tttgggaggg ctgcgtgtgt gaggggtgaga gagtactcta tagggcatga tttggcagcg      240
gacgaaacat atgatagctg ggccattaca gtgcgagaca tgggtgcagct tcgtaggaag      300
tgtgagatgt tcacatacat gaggtttgac ttggaagtga cgctagtcac caccagctat      360
caagaaccag ggacaatcac caccaggat atgcccgtcc taaccacca gattatgtat      420
gtgccgccag gaggcccggg cccagccaag gctgacagtt acgcgtggca aacgtcaaca      480
aatcccagta tattctggac cgaaggcaac gctccacctc ggatgtctat cccatacatt      540
ggcatcggca atgcatatag cagcttttat gacgggtggt cgagcttcaa caactcgggt      600
gtgtatggct acacaaccct gaataacatg ggtaaaactgt acttcagaca cgtgaacaaa      660
cacagcccaa acactattaa gagcactgtg aggatataatt tcaagcccaa gcacgtccag      720
gcgtgggtcc caagaccacc gcgcttgtgc ccgtatctga ataagaggga tgtcaacttt      780
gaagtgcac ccgttacgag caagagagac agtattaact ggggtgccaca aacaaaccgc      840
caagtgtaca atcat

```

<210> 69  
 <211> 876

<212> DNA  
<213> Enterovirus

<220>  
<221> misc\_feature  
<222> (0)...(0)  
<223> E29, strain JV-10

```

<400> 69
aatgaaccta gtagtgccat tgagagagca attgtgcgcg tagcagatac tatggccagt      60
gggcctgcaa actcagagca aatccctgcc ctaaccgctg ctgagactgg tcacacctcg      120
caagtgggtc ccagcgacac tatgcaaacc cgccatgtat gtaactacca caccagatct      180
gaatcatcga tcgagaactt cctatgcagg gctgcatgtg tctacatagt gagttacaaa      240
acacagggcg acgaacaaac cgacaaatac gctagtgggg agatcaacac gcggcagggtg      300
gcacagttaa ggagaaaatt ggaattcttt acttacataa gatttgacat ggaggtaaca      360
tttgtgatca ctggttcaca agacaccagc acacagacta acacggatac gccagtgcta      420
acccatcaaa ttatgtatgt gcctccccggg ggtccagtag cgacatcagc cacagattac      480
agctggcaga catctacaaa tcccagtggtg ttctggacag aaggggaatgc gcctccccgt      540
atgtccatac ccttcatgag cataggcaat gcgtatgcta atttctatga tgggtgggtcg      600
cactttagcc agtcaggggt gtatgggttac accacactca ataatatggg taccctgtat      660
ttcaggcacg tgaacaactc gaccatcggg ccttacacca gtgcagttag gatatatattc      720
aagccaaagc acgtcaaagc gtgggtgcca cgaccgccac ggttgtgcca ttacaaacac      780
aaaaagaacg tagactttac tcccacaggt gtgaccacaa ctagagacaa gataaccttg      840
gacaagggga ctcacgtgcc gagcgtatgg aacaca                                876

```

<210> 70  
<211> 876  
<212> DNA  
<213> Enterovirus

<220>  
<221> misc\_feature  
<222> (0)...(0)  
<223> E30, strain Bastianni

```

<400> 70
aatgaccccg aaggtgcact taataaagca gtgggcaggg tagctgatac tatagctagt      60
gggcccgtca atacagagca aattcctgca ttgacagcag tggagacagg gcatacatct      120
caagtgggtac ctagtgacac aatgcaaacc cgacacgtgg tcaacttcca tactagatca      180
gagtcatcgt tacagaactt catggggaga gcggcatgtg tatatatcgc ccatatgcc      240
acagaaaagg ctaatgatga tttggacaga tacactaact gggagatcac aactaggcag      300
gtggcacagt tgaggcgcaa gttggagatg tttacgtata tgagatttga cctcgagatt      360
acattcgtaa tcaccagctc ccagcgtaact tccaacaggt atgcgtcaga ctcccccca      420
ttaacacatc aaataatgta cgtgccgcgc gggggtccaa ttcccaaggg ttatgaagac      480
tttgccctggc agacgtccac caacccaagt gtgttttgga ccgaaggtaa cggccctcct      540
aggatgtcaa taccattcat gagcgttggc aacgcataat gtaactttta tgatggatgg      600
tcccatttca gtcagagcgg tgtgtacggg tacactacat tgaacaacat ggggcgctta      660
tatttttagac atgtaaacaa atcaacagga taccagtaa atagtgtcgc ccgctctat      720
ttcaagccca agcatgtgaa ggcattgggt cctcgcgcg cgcgcttatg tccatatttg      780
tatgtataaa atgtcaactt tgatgtgcaa ggcgtgaccg agtccccggg taagatcact      840
ctcgaccgtt cgactcacia ccccggtgta accact                                876

```

<210> 71  
<211> 876  
<212> DNA



<213> Enterovirus

<220>

<221> misc\_feature

<222> (0)...(0)

<223> E30, strain Frater

<400> 71

aatgaccctg	aaggtgcgct	caacaaggcg	gtgggcagag	tggctgatac	aatagccagt	60
gggcccgtca	acactgagca	aattcccgcg	ttgacagcag	tggaacagg	gcacacatct	120
caagtagtac	ctagtgtatac	aatgcaaaact	cgacacgtgg	tcaacttcca	caccagatca	180
gaatcatcgt	tggagaactt	catgggaaga	gcagcgtgtg	tgtatatcgc	tcattatgct	240
acagagaagg	ctaattgatga	tttagacaga	tacaccaact	gggaggtcac	aaccaggcag	300
gtagcacagt	tgaggcgtaa	actggagatg	ttcacgtaca	tgaggtttga	cctcgagatc	360
acatttgtaa	tcaccagctc	ccagcgcaact	tcaaccaagt	atgcgtcaga	ttccccccca	420
ctaaccacacc	agataatgta	tgtaccgcgc	ggggggccga	tccccaagg	ttatgaagat	480
tttgccctggc	agacgtccac	caacccaagt	gtatttttga	cggaaggtaa	cgccccccct	540
aggatgtcga	taccattcat	gagcgttggg	aacgcatact	gcaactttta	cgacggatgg	600
tcccatttca	gccagagcgg	tgtgtacggg	tacactacat	tgaacaacat	ggggcacttg	660
tatttcagac	atgtaaacaa	atcaactgca	taccagtgta	acagtgttgc	ccgcgtctac	720
ttcaagccca	agcacgtaaa	ggcttgggtg	cctcgcgcgc	cacgcttatg	tccatatttg	780
tatgcaaaaa	atgtcaattt	tgatgtacaa	ggtgtgaccg	agtctcgggg	aaaaatcact	840
cttgatcgat	cgactcaca	ccctgtgtca	accacg			876

<210> 72

<211> 877

<212> DNA

<213> Enterovirus

<220>

<221> misc\_feature

<222> (0)...(0)

<223> E30, strain Giles

<400> 72

aacgaccccg	aacatgcgtt	aaacaacgcc	attggtagag	tggcagatac	gatcgccagt	60
gggcccgtga	actcggaacg	catacctgca	ctaaccgcag	tggagacagg	acacacgtct	120
caagtgggtg	caagcgacac	catgcaaaac	aggcacgtag	tcaacatgca	tacaagatcc	180
gaatccacca	tcgaaaattt	catgggaagg	gctgcttggt	tatacattgc	gcaatacgcc	240
actgataagg	ccagtgtatga	tctggacagg	tacaccagct	gggagatcac	tacgagacag	300
gttgcgcaat	tgaggagaaa	gctggagctg	tttacatata	tgaggatatga	cttagaagtt	360
acctttgtca	ttaccagttc	ccagcgcaact	tcgactacat	atgcatcaga	ctccccgcca	420
ttgaccaccc	aaattatgta	tgtgcctccc	ggggggcccta	ttcccatagg	acacgaagac	480
ttcgccctggc	agacttcaac	aaaccccagt	gtctttttga	ctgaaggaaa	tgccccacca	540
cgtatgtcca	taccattcat	gagtgtgggc	aatgcctact	gcaattttta	cgatgggtgg	600
tcacatttta	accagagtgg	ggtgtatgga	tacactacac	taaacaacat	gggtcgctta	660
tatttcaggc	atgtaaacag	atctactgcc	taccagtgta	atagtgttgc	acgtgtttac	720
tttaaaccca	aacacgtcaa	agcctgggtc	ccacgagcac	cacgattgtg	cccatacttg	780
tatgctaaga	acgtgaactt	taatgtgcaa	ggtgtgactg	actccccgaga	caagataaacc	840
gtagaccgaa	ccaacatgt	acgtatgcgc	accacag			877

<210> 73

<211> 876

<212> DNA

<213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E30, strain PR-17

<400> 73  
 aacgacccccg aacacgtggt aaacaatgcc gttggcagag tggcagatac aatcgccagc 60  
 gggcccggtga actcggaaacg cgtacctgca ctaactgcag tggagacagg gcatacgtct 120  
 caagtgggtgc caagcgatac tatgcaaaca agacacgtag tcaacatgca cacaagatct 180  
 gaatccacta tcgaaaattt catgggaagg gctgcttggt tatacatcgc acaatacgtc 240  
 actgacaaaag ccagtgcgca tttggatagg tacaccagct gggaaatcac cagcagacag 300  
 gttgcgcaat tgaggagaaa gttggaaatg ttcacataca tgaggtatga cctggaagtc 360  
 acctttgtta tcaccagtgc ccagcgcacc tcgactacat atgcatcaga ttccccacca 420  
 ttgactcatc agatcatgta cgtgcctccc gggggcccca ttcctatagg atacgaggac 480  
 ttgcgcctggc aaacatcgac taaccctagt gtcttttggga ctgaaggaaa tgccccacca 540  
 cgcatgtcca ttccatttat gagtgtgggc aatgcctact gcaattttta cgatgggtgg 600  
 tcacacttta gccagagtgg ggtgtacgga tacactacac taaataatat gggtcgtctg 660  
 tatttcaggc atgtaaacaa atctactgcg taccgggtta atagtgttgc acgtatttac 720  
 ttcaaaccga aacatgttaa agcctgggtc ccgcgagcac cagcactgtg cccatatttg 780  
 tatgcaagga acgtgaactt taatgtgcaa ggtgtgactg actcccga ga aaagataacc 840  
 atagaccgaa ccaaccatgt gcccatgcgt aacaca 876

<210> 74  
 <211> 876  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E31, strain Caldwell

<400> 74  
 ggggacacgg aacatgcagt tgagtcagct atctccaggg tagcagatac cattagctca 60  
 ggtcctagta aactgtttgc tataccagcg ctcaccgcgg cagaaacggg ccacacatcg 120  
 caagtcaccc ccagcgacaa tcttcagacg cgccatgtta agaactatca ctcccgtctt 180  
 gagtcaacta ttgaaaactt cctgtgtaaa tccgcgtgtg tgcatattgc gtcatacaac 240  
 gcatacgggtg atgttggatc agacagtaga tatgatagtt gggagatcaa catcagggaa 300  
 atggtgcagt taaggaggaa gtgcgaaatg ttcacctatc tcagatttga catggagggtg 360  
 acatttgtca tctactagcaa gcaagatcaa gggacttcgc tatcacaaga catgccagtg 420  
 ctaacacatc agatcatgta cgtgccgcca ggcggatccg tgcccactag cgtccagagc 480  
 tacgcatggc aaacatccac caaccgcagc gtgttttggga cagagggcaa tgcccctgct 540  
 agaatgtcca tcccattcat tagcataggg aatgcataca gcagcttcta cgacgggtgg 600  
 tcacatttca cccaacaagg tggctatggc tataatacac tgaacaagat gggtaagttg 660  
 tttgtaaggc atgtgaataa agaaacacca acccatgtga cgagcacgat acgtgtatat 720  
 tttaaaccaa agcatgttag agcgtgggtg ccaaggccac ctagattgtg cccgtacatc 780  
 aataaagcgg actgtaactt cgctgttaca ccactcacca aacagcgggt aggaatcaac 840  
 gatgtcccgc ggcccagcca cacattacat actcat 876

<210> 75  
 <211> 875  
 <212> DNA  
 <213> Enterovirus

<220>

<221> misc\_feature  
 <222> (0)...(0)  
 <223> E32, strain PR-10

<400> 75  
 aacgaccccg caaccgctat tgaaggagca gtccggcgag tggcggacac gatccagagc 60  
 ggaccgagca attcggagcg ggttccagcg ttaacggccg ttgagacagg tcacacagca 120  
 cagggttacc cagtgatgac aatgcaaact agacatgtac acaacttcca caccagatcg 180  
 gagtctagca tcgagaactt cctcagtaga gcagcttggtg tgtacatagg gaaatatagt 240  
 agcaatgcaa caacacaaga tgaacaatac atgtcatgga caattaatac cagacagatg 300  
 gtgcagctga gacgcaaatt cgaaatgttc acctacctac gcttcgacgt agaagtcact 360  
 tttataataa catcgaccaa agatcaaggg acacagttca accaggatgc gcccgtaatg 420  
 tgccaccaa tcatgtatgt gccacctggt ggcccgggtgc ctaagagtgt tgatgacttc 480  
 acatggcaaa cctctactaa ccctagtgtc ttttgggtcag aaggcaatgc accaccgaga 540  
 atgaccattc cattcattag tatagggaac gcctacagca gcttttatga tggctgggtca 600  
 cacttctctc aaaatggggt ttacgggttt aatgcactca ataacatggg taaactgtat 660  
 gtgagacaag tgaacctaaa agcccctatg ccagtcagca gtacagttag gatctatttc 720  
 aaacccaagc atatcaaagc ttgggtaccc agaccaccgc gtctatgtaa gtacctgaag 780  
 tctgggagtg tcaattttga gccactgat ttgacagaaa aacggaaatc cagaaagtac 840  
 atcccaaaaa ctttcagacc agatgtgaga accat 875

<210> 76  
 <211> 843  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E33, strain Toluca-3

<400> 76  
 ggtgatgtgc atgatgcagt tgtgggtgcg atgtcgcgcg tcgctgatac agtagcaagt 60  
 ggccctgcaa actctgagag cgtgcctgct ctactgcgg tagaaactgg acacacgtca 120  
 caggtgacac caagtgatac aatgcagacc agacacgtac acaacttcca cacacggtcc 180  
 gaatcgtaa tcgagaactt ctttaagccgc tctgcatgtg tctattatgc aacgtacaaa 240  
 acaacagcca gcagacccga agaccaattc gttagggtgt ccatttcata ccgccagggtg 300  
 gcccaactgc gcaggaaaat ggaaatgttc acctacctgc gctacgatgt ggaggtcact 360  
 tttgtgatta caagttctca ggacccatcg accaacgtaa gccaggatgc tcctgtactc 420  
 acacatcagt taatgtacgt accccccggg ggtccagtgc ccaaaaattc aagagactat 480  
 gcatggcaaa catccaccaa cccgagtgtg ttctggaccg aggggaacgc accaccaagg 540  
 atatccatcc cttttatcag tgtgggcaac gcatacagtt gcttttatga tggatgggtcc 600  
 cactactcac agacgggggt gtatggttac aacaccttaa acgacatggg ccaattattt 660  
 gtcaggcacg tgaatgaggc aagcccgggt gcggtgtcaa gtgtagttag gatttacttc 720  
 aaacccaaac atgtgaaggc atgggtcccg agaccaccac ggttgtgcca atatgttaac 780  
 gcagcaacgg tgaacttcac tcctgaagggt gtcactaagg cacgtactga tctcatgaca 840  
 aca 843

<210> 77  
 <211> 915  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; E34, strain DN-19

&lt;400&gt; 77

ggaatagaag	aaactattga	cacagtgate	accaacgctt	tacaactgtc	tcagcccaaa	60
ccgcagaaac	aactcactgc	tcaatccacc	gcctcatcca	gcgaggtcaa	ttcacaagaa	120
gtgccagcat	tgactgctgt	ggagacggga	gcttctggtc	aagccatacc	cagcgacgtg	180
attgagacca	gacatgtcgt	caattacaaa	actagatctg	aatcaaccct	tgagtcattc	240
tttggtagat	cagcatgcgt	aaccatactg	gaagtagaga	acttcaatgc	cactaccgaa	300
tcggacaaga	aaaagcaatt	caccacctgg	ccaatcacat	acaccaaacac	agtccagttg	360
cgcaggaaat	tgggaattctt	tacatactcc	agatttgatc	tggaaatgac	ttttgtcata	420
actgagaggt	accacacaag	taatacagga	catgctagaa	atcaagtgtg	ccaaataaatg	480
tacataccac	cgggtgcgcc	aaggcccaca	gcacgggatg	attacacctg	gcaaagttca	540
tccaatccat	cagtgtttta	cacatatggt	agcgcgcctc	ccagaatgtc	tatcccatat	600
gttggcattg	ccaatgcata	ctcacacttt	tatgacgggt	ttgcccagat	tcccctgaaa	660
gatgatacaa	ctgactccgg	tgacactttt	tatggattgg	tcaccatcaa	tgactttgga	720
acattggctg	tgaggggtgt	gaatgagttc	aaccctgcaa	ggataaacatc	aaaggtcaga	780
gtttatatga	agcccaaaca	tgtgaggtgt	tgggtgccta	ggccaccgcg	cgcagtgccc	840
tatcgtggtg	aaggggttga	tttcaaacaa	gattcaatca	cgccaataac	agcagtcacc	900
aatattaata	ccttc					915

&lt;210&gt; 78

&lt;211&gt; 936

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; EV68, strain Fermon

&lt;400&gt; 78

tcaaaccact	tacatggagc	agaggcagcc	tatcaggtgg	agagtatcat	caaaacagca	60
actgatactg	tgaagagtga	gattaacgcc	gaacttggtg	tggcccttag	tctaaatgca	120
gttgaaactg	gtgcaacttc	caacactgaa	ccagaagaag	ccatacaaac	tcgcacagta	180
ataaatcagc	atgggtgtgtc	ggagacgtta	gtggagaatt	ttcttggtag	ggcagcccta	240
gtgtcaaaga	aaagttttga	atacaagaat	catgcctcat	ccagcgcagg	gacacacaaa	300
aactttttta	aatggacaat	taatactaag	tcttttgtcc	agttaagaag	aaagctggaa	360
ttattcacat	accttaggtt	tgatgctgaa	atcaccatac	tcacaactgt	ggcagtaaat	420
ggtaataatg	acagcacata	catgggtctc	cctgacttga	cactccaagc	aatgtttgta	480
ccaactggtg	ctcttactcc	aaaggagcag	gattcatttc	attggcaatc	aggcagtaat	540
gctagtgtgt	tctttaaaat	ttctgatccc	ccagctagaa	tgactatacc	ttttatgtgc	600
atcaactcag	catattcagt	tttttatgat	ggctttgctg	gatttgagaa	aaatggtcta	660
tatggaataa	accagctga	cactattggc	aacttggtgtg	tcagaatagt	gaatgaacat	720
caaccagttg	gttttacagt	gaccgttagg	gtttacatga	agcctaaaca	tataaaagca	780
tgggctccac	gaccaccgcg	aaccatgcca	tacatgagca	ttgctaatgc	aaattacaaa	840
ggtagagata	cagcaccaaa	cacacttaat	gccataattg	gtaatagagc	gagtgtcaca	900
actatgcctc	acaacatagt	aaccaccggt	cggggt			936

&lt;210&gt; 79

&lt;211&gt; 861

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

<221> misc\_feature  
 <222> (0)...(0)  
 <223> EV69, strain Toluca-1

<400> 79  
 aatgaccagc acaatggggc gatcggtgcc aacacaacag ctagcggacc ttctaattcg 60  
 gaaagcatac cggcacttac tgcggctgag actggccaca catcgcaggt tgtccctagc 120  
 gacaccatcc agacaagaca tgtgaaaaac taccactcgc gttcagagtc caccatagag 180  
 aacttctctgt gtagatctgc ctgtgtgtac tacaccacgt acaacactca gggcgagcaa 240  
 gcacatgata aatacgcaag ttggccaatc acgactagaa aagttgcca actgcgagcagg 300  
 aagctggagt tctttacctt cctgcggttt gatctcgaga tcacgttcgt gatcacgagc 360  
 gccagatca catccacgaa ccaaaaccag gatgccccag tactcacaca tcaggtgatg 420  
 tatgtacccc caggggggggt ggtaccgcgc agtgtggatg actatagttg gcagacttcc 480  
 accaatccca gcatcttctg gacagaaggg aacgcacctc ctctgtatgtc aataccattc 540  
 attagtgtgg gcaacgccta cagcagcttt tacgacgggt ggtcacactt tgaacaaacc 600  
 ggggtatatg gattcaatac ccttaataat atggggactt tgtacgccag gcacgttaac 660  
 ggtgctagtc ccgggccagt caagagcacc attaggatat atatgaaacc taaacatgtg 720  
 aaagcgtgga tacctaggcc cccacggttg tgcgactatg tgaaatctgg caacgtcaac 780  
 tttgaaccaa aaggagtcac cgagagcaga ccattctataa agttagaaaa gacctcaagt 840  
 gggcacaggc tgacaaccca c 861

<210> 80  
 <211> 7  
 <212> PRT  
 <213> Enterovirus

<400> 80  
 Met Tyr Val Pro Pro Gly Gly  
 1 5

<210> 81  
 <211> 7  
 <212> PRT  
 <213> Enterovirus

<220>  
 <223> Xaa(Position 3) = Val or Ile  
 <223> Xaa(Position 5) = Pro or Thr

<400> 81  
 Met Tyr Xaa Pro Xaa Gly Ala  
 1 5

<210> 82  
 <211> 7  
 <212> PRT  
 <213> Enterovirus

<220>  
 <223> Xaa(Position 3) = Gln or His

<400> 82  
 Phe Gly Xaa Gln Ser Gly Ala  
 1 5

<210> 83  
 <211> 7  
 <212> PRT  
 <213> Enterovirus

<220>  
 <223> Xaa (Position 3) = Ala or Val

<400> 83  
 Thr Ala Xaa Glu Thr Gly His  
 1 5

<210> 84  
 <211> 7  
 <212> PRT  
 <213> Enterovirus

<220>  
 <223> Xaa (Position 7) = Ala or Val

<400> 84  
 Thr Ala Val Glu Thr Gly Xaa  
 1 5

<210> 85  
 <211> 7  
 <212> PRT  
 <213> Enterovirus

<400> 85  
 Gln Ala Ala Glu Thr Gly Ala  
 1 5

<210> 86  
 <211> 7  
 <212> PRT  
 <213> Enterovirus

<220>  
 <223> Xaa (Position 2) = Phe or Tyr

<223> Xaa (Position 3) = Ile or Val

<223> Xaa (Position 7) = Ala or Gly

<400> 86  
 Met Xaa Xaa Pro Pro Gly Xaa  
 1 5

## SEQUENCE LISTING

<110> THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED  
 BY THE SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN  
 SERVICES CENTERS FOR DISEASE CONTROL AND PREVENTION  
 Oberste, M. Steven  
 Maher, Kaija  
 Kilpatrick, David R.  
 Pallansch, Mark A.

<120> TYPING OF HUMAN ENTEROVIRUSES

<130> 68018/PCT

<140> PCT/US00/07828

<141> 2000-03-24

<150> US 60/127,464

<151> 1999-03-31

<160> 86

<170> FastSEQ for Windows Version 3.0

<210> 1

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> UNKNOWN

<400> 1

gcertgcaatg aytcttcwgt

20

<210> 2

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<221> modified\_base

<222> (1)...(0)

<223> Inosine

<221> modified\_base

<222> (3)...(0)

<223> Inosine

<221> modified\_base

<222> (13)...(0)

<223> Inosine

<223> UNKNOWN

<400> 2

ngcncdcat tgntgsc

18

<210> 3

<211> 20

<212> DNA  
<213> Artificial Sequence

<220> ..  
<221> modified\_base  
<222> (3)...(0)  
<223> Inosine

<221> modified\_base  
<222> (6)...(0)  
<223> Inosine

<221> modified\_base  
<222> (12)...(0)  
<223> Inosine

<221> modified\_base  
<222> (15)...(0)  
<223> Inosine

<223> UNKNOWN

<400> 3  
gcncngayt gntgnccraa

20

<210> 4  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<221> modified\_base  
<222> (9)...(0)  
<223> Inosine

<221> modified\_base  
<222> (12)...(0)  
<223> Inosine

<221> modified\_base  
<222> (15)...(0)  
<223> Inosine

<221> modified\_base  
<222> (18)...(0)  
<223> Inosine

<223> UNKNOWN

<400> 4  
atgtaygtnc cncnggngg

20

<210> 5  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<221> modified\_base  
<222> (3)...(0)  
<223> Inosine

<221> modified\_base



&lt;222&gt; (9)...(0)

&lt;223&gt; Inosine

&lt;221&gt; modified\_base

&lt;222&gt; (15)...(0)

&lt;223&gt; Inosine

&lt;223&gt; UNKNOWN

&lt;400&gt; 5

ggngcrttnc cytcngtcca

20

&lt;210&gt; 6

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;221&gt; modified\_base

&lt;222&gt; (6)...(0)

&lt;223&gt; Inosine

&lt;221&gt; modified\_base

&lt;222&gt; (8)...(0)

&lt;223&gt; Inosine

&lt;221&gt; modified\_base

&lt;222&gt; (9)...(0)

&lt;223&gt; Inosine

&lt;221&gt; modified\_base

&lt;222&gt; (18)...(0)

&lt;223&gt; Inosine

&lt;223&gt; UNKNOWN

&lt;400&gt; 6

acrtgncnng tytgcatngt

20

&lt;210&gt; 7

&lt;211&gt; 18

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;221&gt; modified\_base

&lt;222&gt; (3)...(0)

&lt;223&gt; Inosine

&lt;221&gt; modified\_base

&lt;222&gt; (15)...(0)

&lt;223&gt; Inosine

&lt;223&gt; UNKNOWN

&lt;400&gt; 7

awnttytayg ayggntgg

18

&lt;210&gt; 8

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

<220>  
 <221> modified\_base  
 <222> (3)...(0)  
 <223> Inosine

<221> modified\_base  
 <222> (5)...(0)  
 <223> Inosine

<221> modified\_base  
 <222> (6)...(0)  
 <223> Inosine

<221> modified\_base  
 <222> (9)...(0)  
 <223> Inosine

<223> UNKNOWN

<400> 8  
 tananngtnc ccatrttrtt

20

<210> 9  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> modified\_base  
 <222> (9)...(0)  
 <223> Inosine

<221> modified\_base  
 <222> (15)...(0)  
 <223> Inosine

<221> modified\_base  
 <222> (18)...(0)  
 <223> Inosine

<223> UNKNOWN

<400> 9  
 atgtayrtnc cnmcngngnc

20

<210> 10  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> modified\_base  
 <222> (3)...(0)  
 <223> Inosine

<221> modified\_base  
 <222> (6)...(0)  
 <223> Inosine

<221> modified\_base  
 <222> (12)...(0)  
 <223> Inosine

<221> modified\_base  
<222> (15)...(0)  
<223> Inosine  
..  
<223> UNKNOWN

<400> 10  
ggnggnggrt cngtnakytt

20

<210> 11  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<221> modified\_base  
<222> (3)...(0)  
<223> Inosine

<221> modified\_base  
<222> (12)...(0)  
<223> Inosine

<221> modified\_base  
<222> (15)...(0)  
<223> Inosine

<223> UNKNOWN

<400> 11  
gangaraayc tnatngarac

20

<210> 12  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<221> modified\_base  
<222> (6)...(0)  
<223> Inosine

<221> modified\_base  
<222> (12)...(0)  
<223> Inosine

<223> UNKNOWN

<400> 12  
cccatnakrt cnatrtccc

19

<210> 13  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<221> modified\_base  
<222> (9)...(0)  
<223> Inosine

<221> modified\_base  
<222> (11)...(0)

<223> Inosine  
 <221> modified\_base  
 <222> (12)...(0)  
 <223> Inosine  
 <223> UNKNOWN  
 <400> 13  
 gtrcttyacna nnagrtcyct 20  
 <210> 14  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> UNKNOWN  
 <400> 14  
 tsaarytgtg caargacac 19  
 <210> 15  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> UNKNOWN  
 <400> 15  
 stgyccagat ttcagtgt 18  
 <210> 16  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> UNKNOWN  
 <400> 16  
 ggnacncayr tnathtggga 20  
 <210> 17  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <221> modified\_base  
 <222> (4)...(0)  
 <223> Inosine  
 <221> modified\_base  
 <222> (9)...(0)  
 <223> Inosine  
 <221> modified\_base  
 <222> (15)...(0)  
 <223> Inosine  
 <223> UNKNOWN

<400> 17  
gccntrttnt grtgncraa

20

<210> 18  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<221> modified\_base  
<222> (3)...(0)  
<223> Inosine

<221> modified\_base  
<222> (6)...(0)  
<223> Inosine

<221> modified\_base  
<222> (12)...(0)  
<223> Inosine

<221> modified\_base  
<222> (15)...(0)  
<223> Inosine

<223> UNKNOWN

<400> 18  
ggnacncayr tnrtntggga

20

<210> 19  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<221> modified\_base  
<222> (3)...(0)  
<223> Inosine

<221> modified\_base  
<222> (6)...(0)  
<223> Inosine

<221> modified\_base  
<222> (9)...(0)  
<223> Inosine

<221> modified\_base  
<222> (15)...(0)  
<223> Inosine

<223> UNKNOWN

<400> 19  
acngcngyng aracnggna

20

<210> 20  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>

<221> modified\_base  
 <222> (3)...(0)  
 <223> Inosine

<221> modified\_base  
 <222> (6)...(0)  
 <223> Inosine

<221> modified\_base  
 <222> (9)...(0)  
 <223> Inosine

<221> modified\_base  
 <222> (15)...(0)  
 <223> Inosine

<223> UNKNOWN

<400> 20  
 acngcngtng aracnggng

19

<210> 21  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> modified\_base  
 <222> (6)...(0)  
 <223> Inosine

<221> modified\_base  
 <222> (9)...(0)  
 <223> Inosine

<221> modified\_base  
 <222> (15)...(0)  
 <223> Inosine

<223> UNKNOWN

<400> 21  
 cargcngcng aracnggngc

20

<210> 22  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> modified\_base  
 <222> (2)...(0)  
 <223> Inosine

<221> modified\_base  
 <222> (5)...(0)  
 <223> Inosine

<221> modified\_base  
 <222> (8)...(0)  
 <223> Inosine

<221> modified\_base

&lt;222&gt; (11)...(0)

&lt;223&gt; Inosine

&lt;223&gt; UNKNOWN

&lt;400&gt; 22

cncngngngg nayrwacat

19

&lt;210&gt; 23

&lt;211&gt; 888

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; CA1, strain Tomkins

&lt;400&gt; 23

ggattggg	cgtatttga	ggctgccatt	gacagcatca	cacaaaatgc	actaaccact	60
gtacaaaata	caacacaatc	aggacctact	cattcaaaaag	aagttccagc	attaacagca	120
gtggaaacag	gtgctactag	tcaagtagaa	ccagggtgact	tgattgaaac	cagacatggt	180
ataaacatga	gacaaagatc	tgaagcatct	atcgaatctt	tctttggccg	atccgcatgt	240
gttgcgatac	ttgggtttgtc	aaacgccaaa	ccaactgaca	caaacaccaa	acaattgttc	300
aaaacatgga	gaatatcata	tttagaaaact	caccaactca	gaagaaaact	tgagttcttt	360
acgtactcaa	ggtttgattt	ggaaatgacc	atagtaatta	cagagagggt	tttcaatgca	420
gtcaatgtcc	cattgcgcaa	ttatgtgtac	caaataatgt	acgttcccc	aggtgctcca	480
gaaccacaat	catgggatga	ttacacgtgg	caatcttcta	ccaacccatc	aatattctac	540
accactggaa	atgctcctcc	cagagtgtca	attccatttg	ttggaatagg	gtctgcatat	600
tcacactttt	atgatggttt	ctcacagatt	cctcttgact	caatcagtgc	tgagagcaagt	660
aataagtatg	gttacacttc	aatcaatgac	tttggtaccc	tggaatttag	aatagtaaat	720
gaatatgacc	cagtgcgaagt	ggatgcaaag	gcccagagtgt	atattaaacc	caaacatggt	780
cgcattgtgt	gccccagacc	accacgggcc	atgccttaca	agaatagcac	agtggatttc	840
gacccatcag	caactgtaat	gacccaagtc	gcagacatca	ggacgtat		888

&lt;210&gt; 24

&lt;211&gt; 882

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; CA3, strain Olson

&lt;400&gt; 24

ggagatccag	tggaagactt	aatcgccaat	acagttgcta	ggactctaga	gagaataacc	60
tctccaactc	ataatacaac	ggcaggcaac	accaccgtta	gcgagcacag	catcggtacc	120
ggttcagtg	ctgcgttgca	agctgctgag	actggggctt	cgtctaacac	cacagatgag	180
agtatgatag	aaacacgggt	tggtgtcaat	aggaatggag	tgattgagac	tagcatcaac	240
catttcttct	cccgagcggg	gcttgtggga	gtgctgaaca	tacttgatgg	aggcacctca	300
aaaggctttg	aagtttggga	tatagacatc	atgggctttg	ttcagcttcg	cagaaagcta	360
gagatgttca	cctacatgcg	gttcaacgct	gaattcacct	ttgtcgcgac	tttgagtgc	420
ggaacaactc	cccatataat	gttgcaatac	atgtatgtgc	cccctggagc	tcccaaacc	480
caggaaagag	attcattcca	atggcagact	gcaaccaacc	catccgtgtt	tgcgaaaatg	540
agtgaccctc	ctccgcaagt	ttcagtacct	ttcatgtctc	ctgctagcgc	ctaccagtgg	600
ttttatgatg	ggtacccaac	atttgatgat	agaccacaga	cctctaatac	tccctacgga	660
caatgcccc	ataacatggt	gggcacattc	gcggtgcgca	ttgttagcaa	gacgcctgcg	720
gagagagact	tgcgcgctccg	tgtttacatg	aaactgaagc	atgtgcgagc	atgggtaccg	780
cgaccataa	ggtcacagcc	ttacgtcttg	aagaactacc	ccaactatga	tggaacccaa	840
atcgtgccca	gtgccaaaga	tcgagaagac	ataaagaaca	ca		882

&lt;210&gt; 25

<211> 915  
 <212> DNA  
 <213> Enterovirus  
 <220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> CA4, strain High Point

<400> 25  
 ggtgatgcaa tcgctgatgc tatacaaaac acagttacat ctactataca gagagtcaca 60  
 accaactactg ttgggcaaga tgcaacagct gctaacacag caccagctc tcatagtttg 120  
 aactactggcc tagtccccgc gcttcaagct gctgagacag gagcttcac cacagccacg 180  
 gatgggaatt tgattgagac tagatgtgtt gtaaactcca atggtacacg tgaaaccac 240  
 attgagcatt tcttctctag gtcagggctg gtgggagtta tggaggtaga tgatacgggt 300  
 actagtggca agggattctc aaactgggac attgacatca tggcgtttgt gcaactgcgc 360  
 cgtaaaactcg aggcatttac atatatgcgg ttcgacgcag agtttacctt tgtcaccaat 420  
 ttggagaacg ggctcacgaa taatagtgtg atacagtaca tgtatgtacc acctggagcg 480  
 cctaaacccg atgcccggga atcattccag tggcaactg caaccaatcc gtcagtcttt 540  
 caaaaaatgg acagtccgcc acctcaagtt tcagtaccct tcatgtcacc agccagtgcc 600  
 tatcaatggt tctatgacgg ttaccccacc tttgggcccc actcggagac atctaatacta 660  
 tcttacgggc aatgtcccaa taatatgctg ggaacattct cggccagggt tgtagcaag 720  
 caaatcacca atcagaaatt ccagatccgt atttatctac ggctgaagag ggtgagggcg 780  
 tggatcccca gacctttgag atcgagccg tacattttaca gaaactacc cactatggt 840  
 actaccatcc aatacctggc caaagatagg cgcaagatca ctgaaactga ttataatgct 900  
 gaacagcgca cgcatt 915

<210> 26  
 <211> 885  
 <212> DNA  
 <213> Enterovirus  
 <220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> CA5, strain Swartz

<400> 26  
 ggcagaccaa ttgcagatat aatagaagga gcagtagctc aaactaccac cagagcacta 60  
 agtggaccaa ttcagccagt gacagcggcc aacacctctc ccagttcaca tcggcttggt 120  
 acggggcaag tgccagcttt gcaagcagca gaaacgggag ccacctcgaa tgcgaccgac 180  
 gagagtttga ttgaaaccag gtgtgtgggc aacagacatg gagtcatgga aactagcatt 240  
 gaacacttct tttcacgctc aggccttgga ggaattttga taattgagga ctccggtact 300  
 tccacgaaag gctacgccac ttgggaaatc gatgttatgg gatttgtcca gctgaggcgt 360  
 aaactagaga tgttcacata catgcgattt gatgcagagt tcacctttat cacagcagaa 420  
 aggaatggca acaccagccc aatacccatc cagtacatgt atgtcccacc cggagcccca 480  
 gtccctactg gtagggagac attccaatgg caaacagcga ccaatccatc cgtgatctca 540  
 aagatgactg atccaccagc ccagggtgtc gtaccattta tgagcccagc cagtacttat 600  
 caatggttct acgatggcta ccccacgttc ggagaagtgc cagtgactac gaacttgaac 660  
 tatggacagt gcccaaaca caaaatgggc actttctgca tccgcattgg ctccaggtgta 720  
 tctacaggca aggacgtcac tgtgcgcat ttcataagat tgaagcatgt gcgcgcctgg 780  
 gtgccaaggc ccatcaggag ccagccttac ttgttaaaga attatcccaa ctttgacaag 840  
 tcaaatattg tagacgcac atcgaacagg acatatacca ccact 885

<210> 27  
 <211> 915  
 <212> DNA  
 <213> Enterovirus  
 <220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> CA6, strain Gdula



&lt;400&gt; 27

aatgacccca	tttcaaattgc	aatagaaaat	gctgtgagca	cactcgctga	caccacgata	60
tcacgtgtta	cagcggccaa	cactgctgct	agctcccatt	cccttggtac	tggacgcgtg	120
ccggcggttc	aggctgcgga	gacaggggca	agttccaacg	ctagcgatga	gaacctgatt	180
gaaactcgtt	gtgtgatgaa	tagaaatgga	gttaacgaag	caagtgtaga	acacttctac	240
tcccgtagc	ggctagtagg	agttgtggag	gtgaaagact	caggcactag	tcaggacggg	300
tacacggtgt	ggcccataga	tgtgatgggc	tttgtgcaac	agcggcgcaa	gttagagcta	360
tctacttaca	tgcgctttga	cgctgaattt	accttttgtgt	ccaatctcaa	tgacagcaca	420
acaccgggca	tgctattgca	gtacatgtac	gtgccgccc	gtgcgccc	accagacggt	480
aggaagtc	atcaatggca	aacagccacc	aacccttcaa	tattcgcaaa	gttgagtgc	540
ccaccgcccc	aagtgtctgt	cccattcatg	tcaccggcgt	cagcctacca	gtggttctac	600
gatggttacc	ccacgtttgg	cgaacacaag	caagctacta	atttacaata	cggtcagtgc	660
cctaacaaca	tgatggggca	ttttgtctatt	cggacagtta	gtgaatccac	caccgggaaa	720
aatgtccatg	tccgggtgta	catgagaatt	aagcacgtaa	gagcatgggt	gcccagacct	780
ttcagatccc	aagcttacat	ggtcaaaaac	tacccgacat	acagccaaac	aatatccaat	840
actgcagccg	atcgtgcgag	cataaccact	acggactatg	aggggtggcgt	accagcaaac	900
ccgcagagaa	ctttt					915

&lt;210&gt; 28

&lt;211&gt; 888

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; CA7, strain AB-IV

&lt;400&gt; 28

ggagacgaaa	tactcgacct	aatcgagagt	gctgtacaga	ataccactaa	agccattacc	60
agctcaatcg	acaccaaacc	tggtgctaac	actcaagcta	gccaaacatcg	tataggcttg	120
ggggaggttc	ccgctcttca	agctgctgag	acaggatcgt	cttcgctcgt	ttcggacaag	180
aacatgatag	aaacaagggtg	tgctgtaaac	aaacacagca	cagaggaaac	cagcattaca	240
aacttctact	ccagggcggtg	cctagtgggg	gttgtgaaca	tgccagtaca	aggaaccagc	300
aacacaaaagg	gtttcgcaaa	gtgggggata	gatataatgg	gctttgtgca	gatgaggcgc	360
aaacttgagc	tcatgacata	catgagattc	tccgcccaggt	ttacgttcgt	acccagcact	420
cctggggggag	agactactaa	ccttatactg	caatacatgt	atgcacctcc	cggagctccg	480
ctgccaaacca	ggcgggattc	atacgaatgg	caaacatcca	ctaacccttc	tattatcagc	540
aagatggcgg	acccacccgc	tcaggtatcg	gttccattcc	tttctcctgc	atcagcatat	600
cagtgggtct	atgatggcta	ccccacattt	gggaaacacc	caatagatca	ggacttccaa	660
tatggcatgt	gcccacaaac	catgatgggc	acattctgtg	tgcgcatgat	cgggtggggc	720
aaaccgaccc	aatcagttac	catacgtata	tacatgagat	taaagcatat	ccgtgcatgg	780
gtgccccggc	cactgaggag	tcagaattac	actatgagga	attacccgaa	ctacaacggg	840
ggcgcaataa	aatgtacatc	aaaaagcaga	gctaccataa	caacctta		888

&lt;210&gt; 29

&lt;211&gt; 882

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; CA8, strain Donovan

&lt;400&gt; 29

ggagattcca	ttgaagacat	aataagcaac	actgtcaccc	gtacactgca	acaaatcagt	60
gccccatcac	acgacactac	agcagccaac	acctcagtga	gtaatcataa	aattggtacg	120
ggggatgtcc	cagctctcca	agctgcagag	actggcgcta	cttccaatgc	ctcagacgag	180
aacatgattg	agacacgatg	tgtgttaa	cgcaatgggg	ttgtggaaac	tagtttgac	240
catttctttt	caagagcagg	ccttgtggga	gtgatcaatg	tgcaagatgg	cggcactcag	300
aagggttttg	aagtgtggga	catagatgtc	atgggggttg	ttcaactcag	gaggaagttg	360
gagatgttca	cgtacatgag	gttcaacgcc	gagttcacat	tcgtatccac	actcgcggat	420

ggcacaactc	ccagagtgat	gttgacgtac	atgtacgttc	cacctgggtgc	ccccaaacct	480
caggagagag	attcgtttca	gtggcaaact	gcaaccaacc	catcagtatt	ttgcaaaatg	540
agtgaccctc	ctccacaggt	ttccgttctt	ttcatgtcac	cagctagtgc	ctaccaatgg	600
ttctacgatg	ggtacccaac	attcgatgat	cgaccggcca	cctcaaacca	cccgtacggt	660
cagtgcccc	ataacatgat	gggcacattc	gcagtgcggt	ttgtcagcaa	gaccccagcc	720
acacgggatc	tgcgtgtcag	agtgtacatg	cgcctgaaac	acgtgcgcgc	atgggtaccg	780
agacctatcc	gatctcaacc	ctatattttg	aaaaactacc	caaattatga	tggcacaaag	840
ataacgtcga	catctaagga	taggcaaagc	atcaaaaaca	ca		882

&lt;210&gt; 30

&lt;211&gt; 894

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; CA10, strain Kowalik

&lt;400&gt; 30

ggcgaccccg	tggaggacat	catccacgac	gctttgagca	gcactgtgcg	gcgggccata	60
actagtggtc	aagatgtcaa	cacagcggcc	ggtaccgctc	ctagctctca	caggttggag	120
actggctcgtg	ttcccgccct	acaagcagca	gaaactggag	ccacttctaa	cgctacagat	180
gagaacatga	tagaaacgcg	gtgtgtcatg	aacagaaatg	gagtgttggg	ggcgactata	240
agtcattttct	tctcacgctc	aggtttgggtg	ggtgttgtca	atctaactga	cggaggcacc	300
gatacaacgg	gatatgcagt	gtgggacatt	gacatcatgg	gttttgtgca	actgcggcgg	360
aaatgtgaga	tggtcacata	catgagattc	aacgctgagt	tcacattcgt	cactacaaca	420
gaaaatggcg	aggcaaggcc	atltatgtta	cagtatatgt	atgtacctcc	aggtgcccct	480
aagccaacgg	gtagagatgc	ttttcagtg	caaacagcga	caaattccatc	cgttttcgtt	540
aagctcacag	atccacctgc	tcaggtatca	gtcccccttca	tgtcacctgc	tagtgccctac	600
caatggttct	atgacgggta	tccaacattt	ggacaacacc	cggaaacatc	taataaca	660
tatggacagt	gccctaacaa	catggatggg	acctttgtcg	tgagagttagt	gagtagagt	720
gctagccagc	tcaaactaca	gacacgagt	tatatgaagc	ttaagcatgt	gagagcatgg	780
atccctaggc	caataagatc	ccagccttac	ctcctaaaga	attttccaaa	ttatgatagt	840
agtaagatca	catacagcgc	aagagatcgt	gccagcataa	aacaagctaa	tatg	894

&lt;210&gt; 31

&lt;211&gt; 912

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; CA11, strain Belgium-1

&lt;400&gt; 31

gggccaatag	aagaaatcat	ctcaactgtt	gccagtaacg	cggtggcgct	cagtcaaccc	60
aagccagtgg	acaactctgt	acaaaacacc	caacaaagt	ctccagtgc	tagccaggag	120
gtgccagcat	tgaccgcagt	ggagacaggg	gcgacaagt	atgtgggtcc	atctgacct	180
attcagacta	gacacgtatt	gaatgttaaa	tccaggtctg	aatccaccat	cgagtcattt	240
tttgcaagag	ctgcatgtgt	aaccattatg	caggtggaca	atttcaacgc	aacctctgtg	300
gaagacaaaa	gaaagtgtgt	tgctaaatgg	gcaatcacct	acactgatag	cgtccagctg	360
agacggaaat	tagagttttt	cacttattct	agatttgact	tagagatgac	ttttgtgcta	420
actgagagat	actactccca	aagctcaggg	catgctagat	ctcaggtgta	ccaaattatg	480
tatgttccac	caggggcacc	cacgcctagt	gcatgggacg	actacacatg	gcaaacatcc	540
tccaacccat	ccattttctt	taccaccggc	aatgcaccac	cgcgcatctc	aattccattt	600
gttggaatcg	ccaatgcata	ctcacacttt	tatgatggct	ttagtagagt	acctttggag	660
ggagaaacaa	cagacacagg	agacgcttac	tacgggctca	cttcaataaa	cgattttggt	720
acacttgacg	tcagggtagt	taatgactac	aacccagcca	gggtggagac	aaggattaga	780
gtatacatga	agcccaaaca	tgtgagagtc	tggtgcccgc	gacctccaag	agcggtaagc	840
tacagaggac	ctggagtcga	cctcctatca	acatcagtaa	cacctttatc	caaacatgac	900

ctagcgacat ac

912

<210> 32  
 <211> 888  
 <212> DNA  
 <213> Enterovirus  
 <220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> CA12, strain Texas-12

&lt;400&gt; 32

ggagatacacg	tgagtgatat	gatcgaaaat	tccatcaacc	gaattaccag	tgcaatttcc	60
actacccaga	cacaccagac	agcagctgac	actagagtta	gtacacacag	gttaggcacg	120
ggggagggtgc	cacctttaca	agcagcagag	acagggtgcca	cctccaacgc	aaccgacgag	180
aacatgattg	aaacacgctg	tgctgtcaac	aggcacgggg	tgagcgagac	cagcgtggaa	240
tactttcttct	ctcgtcttgg	tttggcagga	atagtcacgc	tggaggatgc	aactgccact	300
aataagggtt	atgccacatg	ggagattgat	gtcatggggt	tcgcgcaact	gcgtcgcaag	360
ctggagatct	tcacatacat	gcgcttcgat	gcagagttca	cttttgtggc	aacagaacgc	420
aatgggagca	ccagcccggg	catgatgcag	tacatgttcg	tgccccctgg	cgccccctgtt	480
ccaacaggga	gagatacctt	ccaatggcaa	tctgtacta	acccttcagt	gctagtaaaa	540
atgacggatc	cacgggcccc	agttgccatc	ccctttatgt	ctccagctag	tgcataccaa	600
tggttctatg	atggatatcc	tacctttgga	gaaagaccag	ttacaaccaa	catgaattat	660
ggacagtgtc	ccaacaacaa	aatgggaact	ttttgtatag	gcactgtctc	cggtgaagcg	720
tcagggaaaa	acatcactat	acgtattttt	atgaggttga	agcatgtaag	agcgtgggtg	780
cctcgcccaa	ttagaagcca	gctatatctg	cttaaaaatt	accccaactt	tgataaact	840
aagatcctca	acgcctccca	caacagagct	tctatcacat	caaacaca		888

<210> 33  
 <211> 927  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> CA13, strain Flores

&lt;400&gt; 33

gggttggaag	atctaataca	acaagttgcg	tctaacgcat	tacaattgtc	ccagccaaca	60
agaccggcac	tcccaccagc	cgagcagagt	gtccccaaca	ctaaccaaac	aactccagaa	120
cactccaagg	aagtcccagc	gttaacggca	gttgaaactg	gcgccacgaa	tcctctagag	180
cctggcgaca	cagttcagac	tagacatgtg	atacaaaacta	gaagtagaag	tgaaagtaca	240
gtggagtctt	tctttgcgcg	agggtgcatgt	gtaaccatta	tgggagtgga	caactataat	300
gagacattga	aaggagacca	gaagtctact	ctatttataa	cctggaacat	cacctacact	360
gacacagtcc	agctacggag	aaaactggaa	atgttcactt	actccagggt	tgacatcgag	420
tttacttttg	tggtgactga	acgctactac	tcatcaaaca	gtgggcatgc	tctgaaccaa	480
gtgtacaaaa	ttatgtatgt	accacctgga	gcaccagtgc	caaagaaatg	ggatgattac	540
acctggcaaa	cctcttcaaa	cccgctccata	ttctacactt	atgggtcagc	accacccagg	600
atatccatac	cctttgtggg	tatagcaaac	gcttactccc	acttctatga	tgggtatgcg	660
acagtgccct	tgaaaactga	caccacagac	tcaggagcag	cctactatgg	agcagtatcc	720
ataaacgact	tcggactgct	tgcaagtgcg	gtcgtcaatg	aacataatcc	agtcagagta	780
tcatccaaaa	ttagagtgtg	tatgaaacca	aaacatgtca	gggtatgggt	tcccagacct	840
ccaagggctg	tagagtatta	tggaccagga	gtggactaca	aggcaaacac	tttaacaccg	900
ttgccaataa	agaatttgac	tacttat				927

<210> 34  
 <211> 888  
 <212> DNA  
 <213> Enterovirus

&lt;220&gt;

<221> misc\_feature  
 <222> (0)...(0)  
 <223> CA14, strain G-14

<400> 34

ggtgacaaag	tggcagacat	gattgagacc	gcagtgaggaga	agaccgtgtc	ctcactaact	60
tcccctattc	aaacccccac	agccgccaac	acaaacgtga	gtaatcatcg	aattgagctg	120
ggggaagtcc	cggcttttgc	agctgctgaa	accggcgcgga	cgtctcttgt	gtctgatgaa	180
tacttgatag	agactcgttg	tgtagtgaat	agccatagta	cagaggaaac	tacagtgggg	240
cacttctttt	caagagcggg	gttggtggga	gtgattgacc	tcccattaca	gggaacagtc	300
aacacaggag	gattcgcctc	gtgggatatt	gatgtaattg	gatatgttca	gatgagaagg	360
aaacttgagc	tggtcacata	tgcccgtctc	gatgcggagt	ttaccttcat	agcttccacc	420
ccagatggcg	aggtgaagcc	agtgttctta	cagtacatgt	tgtcccccc	tggtgcacca	480
aaaccaacag	ggcgcaacac	ctacgaatgg	caaactgcaa	caaacccttc	tgtgttggtc	540
aagagcacag	atcctccagc	acaagtctct	gtaccgttca	tgtcaccagc	cagcgcatat	600
cagtggttct	atgacgggta	cccaaccttt	ggaaagcacc	tgccctgctga	tgactttcag	660
tacggatatga	cccaaataa	catgatggga	tcgttctgtg	ccaggatagt	gggggaagga	720
gcgcctagtg	tacacttggt	tatccgtatc	tacatgcgca	tgaaacacgt	gcgggtgtgg	780
attccacgac	ctatgcgcag	ccagccatac	gttgcggaaga	attaccctaa	ctacaagggg	840
tctgagatca	agtgcgcac	atctagtcgt	aagtcaatca	ccacatta		888

<210> 35  
 <211> 912  
 <212> DNA  
 <213> Enterovirus

<220>

<221> misc\_feature  
 <222> (0)...(0)  
 <223> CA15, strain G-9

<400> 35

gggccaatag	aggagatcat	ctcgaccgtc	gccagcaatg	cacttgcctt	cagtcagcct	60
aaaccggtgg	ataattctgt	acaaaacacc	caacagagcg	cgcccgtgca	cagccaagag	120
gttccagcat	taacagcagt	agagactgga	gcaacaagtg	atgtgggtgcc	agctgatcta	180
gtgcaaacca	ggcatgtagt	gaatgtcaag	tccagatctg	agtcactat	cgagtcgttc	240
tttgcaagag	ctgcctgcgt	gactattatg	caggttgata	actttaatgc	caccaccacg	300
gaggacaaga	ggaagtattt	tgccaaatgg	gccatcacat	acacagacac	agtacaattg	360
aggaggaaat	tggaattttt	cacgtactcc	aggttcgata	ttgagatgac	tttcgtgcta	420
actgaaagat	actattctca	gagctcggga	cacgctagat	cgcagggtga	tcaaatacatg	480
tacgtccctc	caggagcacc	aacaccaa	gcattgggatg	attacacgtg	gcagacgtct	540
tctaaccat	caattttctt	caccactggt	aacgcacccc	cacgggtttc	aatcccat	600
tggggcttg	caaatgctta	ctcacacttt	tatgatggct	tcagcagggt	acctttggaa	660
ggagagacca	ctgactcagg	tgacgcttat	tatggcctca	cttctatcaa	tgactttgga	720
acacttgacg	taagagtggg	caatgactac	aaccagcgga	gagtggagac	aaggatcaga	780
gtctacatga	aacctaaagca	tgtgagagt	tggtgtccac	gaccccttag	ggctgtgagc	840
tacagaggac	ccggtgtgga	cctactgtcc	acctcagtga	cgccctatc	taagcatgaa	900
ttgacaacgt	ac					912

<210> 36  
 <211> 918  
 <212> DNA  
 <213> Enterovirus

<220>

<221> misc\_feature  
 <222> (0)...(0)  
 <223> CA17, strain G-12

<400> 36

ggcattgaag	acttgatcca	acaggttgca	tcgaatgcgc	tgcaaatctc	acagccgacg	60
cgtccggcac	tgccctctac	agaaagtctt	cccaacacac	aacaatcggc	accttcgcat	120
tctcaagagg	tcccggcgct	gacagcagtt	gagacaggcg	cgacaaatcc	attggagccg	180

tctgacacgg	tacaaacaag	gcatgtttatc	cagactagat	ccagggtcaga	gtccacaata	240
gagtccttct	tcgcgctgg	tgcattgtgtg	acaatcatga	cagtggaaaa	ttttaacgag	300
actgaggcgg	cagacaagaa	aaagttgttc	gccacttgga	atattacata	cacagacaca	360
gtgcagctca	gaaggaagtt	ggagatgttc	acttactctc	gatttgacat	tgaatttacc	420
tttgtcacca	cagaaaggta	ctacgccagt	aactcaggcc	atgcgcgtaa	tcaggttttac	480
caactcatgt	atgtaccccc	aggagcccct	gtgccacaac	aatgggatga	ttacacgtgg	540
caaacttcct	ccaacccatc	ggtgtttttac	acatacggtg	acgctccagc	gcgcatttcc	600
ataccatttg	tagggatagc	taatgcctat	tcccactttt	atgacggcta	tgcagtgggtg	660
ccattgaaag	attccaccca	ggatgctggt	gctgcctatt	atggtgcaac	ctcaattaat	720
gattttggaa	tgttgcggt	gagagtagtc	aacgaattca	accagccag	aatcacatct	780
aaattgagag	tgtacatgaa	accaaagcat	gttaggggtg	ggtgtcctag	accaccaagg	840
gtggtgccgt	acttcggacc	cgggtgttgat	tataaggata	gtttgacacc	gctttctaca	900
aaagcactca	acacttat					918

&lt;210&gt; 37

&lt;211&gt; 927

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; CA18, strain G-13

&lt;400&gt; 37

ggcttggaag	acctcatcca	acaagtggcc	acgaatgcat	tgagtctgtc	gcagcccaca	60
agacccgcac	ttccaccagc	agaacaaagt	gtgccaacaa	ccagtcagac	caccccagaa	120
cattcaaagg	aagtacccgc	actcactgca	gtggagaccg	gtgcaaccaa	cccattggaa	180
ccagggtgaca	cagtgcacac	tagacatggt	gttcaaacaa	gatcaaggag	cgaaagtacg	240
gtggaatcct	tctttgcaag	aggggcgtgt	gtcacgatta	tgggagttga	caattacaat	300
gaaagcttga	ccagtagtca	aaaatccacc	ctattcgcca	cttggaatat	tacatacact	360
gatacagtac	agttgaggag	aaaattggaa	atgttcacct	actccagatt	tgacattgaa	420
tttaccttcg	tagtaactga	acgttactac	tcgtcaaaca	gtggccatgc	cttgaatcag	480
gtgtatcaaa	tcatgtatgt	gccaccaggc	gctccaattc	ctaagaagtg	ggatgattat	540
acctggcaaa	catcatcaaa	cccctcaata	ttctacacct	atggaacagc	accacccaga	600
atttcgatcc	cttttgtggg	cattacaaac	cgcgtactcac	atttttatga	cggatatgag	660
actgtaccac	tcaagacaga	cactacggat	cggggggcgg	ccttctatgg	agcagtttcc	720
atcaatgact	ttgggttgtt	ggcgggtgcga	gttgtcaacg	agcacaaccc	ggtaagagtg	780
tcttcaaaga	taagagtgtg	catgaagcct	aaacatgtca	gagtgtggtg	cccacgacca	840
ccacgtgccg	tggagtacta	cggaccaggg	gtagattaca	aggcaaacac	attgacacct	900
ctccctacca	agaacttaac	tactttat				927

&lt;210&gt; 38

&lt;211&gt; 888

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; CA19, strain 8663

&lt;400&gt; 38

ggtattgatg	atatcataga	taatgttgta	accaatgctt	tgaagggtgc	catgccacaa	60
gttcaagata	cgcaatctag	tggaccagtt	aactcaaaag	aagtacctgc	attaacagct	120
gttgaaacag	gggtacttag	tcaagttgac	ccatcagacc	taatagaaac	tagacatggt	180
attaataacc	gcctcagatc	tgagtgcaca	atagaatcat	tctttgggag	gtcagcatgt	240
gtggccataa	ttgggttatc	taaccaaata	cccaccagtg	acaatgcagc	caagctcttt	300
gctacatgga	agattagttg	tcttgatatg	tatcaattga	gaagaaaatt	ggaattcttc	360
acatactcca	gatttgatct	tgagttaacc	tttgtaattt	cagaaagatt	cttcacctca	420
acttcagctg	ctgcaagaga	ttatgtatac	cagatcatgt	acattccccc	aggagcccct	480
atccctcagg	tatgggatga	ttacacatgg	caatcatcca	caaacccttc	aatattctac	540
accacaggaa	atgcatgccc	tagagtgtcc	atcccttttg	ttgggatcgg	tcagacatac	600

tctcacttct	atgatggatt	ctcttttagta	ccttttcaata	ccatcgatgc	tgggtgcttca	660
aacaggtacg	ggtacaccac	cataaatgat	tttgggacta	tggcaatcag	gatagttaat	720
gaatacgacc	cagtcacaat	tgatgcaaaa	gtcaggggtt	acatgaaacc	aaagcatatt	780
aaggtgtggg	gccccagacc	tccacgggca	gtagcataca	atggggccaac	agtgaatttt	840
aatgaaaacc	cccatgtaat	gacagcagtt	gctgatatta	gaacttat		888

<210> 39  
 <211> 909  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> CA20, strain IH-35

<400> 39						
ggtatcgaag	atctttatcac	cgaagttgca	agcaacgctc	tgaagttgtc	acaaccaaaaa	60
cccagcacac	aacagagttt	accaaact	agtagctcag	aaccaactca	ctctcaggaa	120
gcgcggcat	tgaçcgag	agaaacagga	gcaactagta	gcgtagtacc	agctgatctg	180
gtccagacg	ggcatgtgat	acaaacacgt	agccgaagt	agtctacagt	tgagtcattc	240
tttgctcggg	ggcggtgtgt	aacaatcatg	tcagtggaaa	attacaatga	aaccgctatc	300
gcagagtcca	aattattttac	caagtggaa	attacctaca	cagacacagt	ccagttgaga	360
agaaaactag	agatgttcac	atactccaga	tttgatattg	agttcacatt	tgtgggtgact	420
gagcgttacc	actccgcaaa	ctcaggtcat	gcactaaatc	aagtttacca	gatcatgtat	480
gttccctccag	gtgcaccagt	gccacaaaga	tgggacgact	acacatggca	aacgtcatcc	540
aacccctcag	tctttttatac	ctatggtaca	gcaccagcca	gaatatcgat	tccatatgta	600
ggcatagcca	atgcctactc	gcatttttat	gatggcttcg	ccaaagtgcc	cattgaaggc	660
gagacgtcag	atccaggtga	tgcatactat	ggtgcaacgt	ccatcaatga	tttcggcatc	720
ttagccatac	gtgtgggtcaa	cgaacacaat	ccagtgcag	tttcttccaa	gattagagtg	780
tacatgaaac	ctaaacatgt	gcgcgtttg	tgtcccagac	cacctagagc	tgttccatac	840
tttggccccg	gggttgatta	taaaggtgac	gccctcacac	cactatcacg	caaggattta	900
accacctat						909

<210> 40  
 <211> 888  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> CA22, strain Chulman

<400> 40						
gggattgagg	atacaatcga	aaaagtgggt	ggtgatgctc	taagggtctc	aatgccacaa	60
gttgccaaca	cccagccatc	aggaccgcga	aattctaagg	aagttccagc	actgacagca	120
gtggaacag	gtgcaaccag	tcaagtcacc	cctgaagatt	tgatcgaaac	caggcatgtt	180
attaacaata	gactaagatc	tgagtgcact	gtggaggcct	tctttggaag	gtctgcatgt	240
gttgccatcc	ttgggtggt	aaacaaaaag	ccagacacca	caaagtccaa	agacctcttt	300
acaacatgga	ggatctta	cctgcaaact	tatcaactga	ggaggaaact	cgaactcttc	360
acgtattcta	gattcttt	ggaattaacg	tttgtcatta	cagaaagata	cttttcaggg	420
acagcagcca	caaccagcga	ttatgtttac	caaataatgt	atgtaccacc	aggagccccc	480
ataccaaata	cctgggacga	ctacacctgg	cagtcattcta	ccaacccctc	tgtcttctac	540
accacaggca	atgccagccc	acgcattgtc	ataccctttg	ttggtattgg	tgccgcctat	600
gctcactttt	atgacgggtt	cagtggtgga	ccattcaatc	aaatagatgc	aggagcatcc	660
aacaaatatg	gctactcatc	aatcaaagac	tttggtacat	tggcagttag	aattgttaat	720
gagtttgatc	cagtgacaat	agaggctaaa	gtcagagtgt	acatgaaacc	caaacatgtc	780
aggggtgtgg	gtccaagacc	acctcgtgca	gtaccatata	aaaactcatc	agttgatttc	840
gccccaaaacg	cagtagcaat	gaaccaagta	gccacaatta	ggacgtat		888

<210> 41  
 <211> 915

<212> DNA  
 <213> Enterovirus  
 <220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> CA24, strain Joseph

<400> 41

ggtatcgaag	ataccattga	cactgtcatt	aacaatgccc	tacaactatc	tcaaccacag	60
ccaaataagc	agttgacagc	tcagtctacc	ccctccacaa	gtggagtaaa	ctcccaggag	120
gttccagctc	tgaccgctgt	ggaaaccggg	gcctcgggac	aagcagtgcc	cagtgatgtg	180
attgagacca	gacacgtggt	taattataag	acccgatctg	aatctactct	tgagtctttc	240
tttggaaggt	cagcttggtg	caccataatt	gaggtcgaga	acttcaatgc	cactagtga	300
gcagacaaga	ggaaacagtt	caccacttgg	ccaatcacat	acaccaatac	cgtgcaattg	360
cgcaggaaac	tagaattctt	cacttactcc	aggtttgacc	tagagatgac	ctttgtagt	420
acagaaagat	attatgccag	caacacaggt	cacgccagaa	accaagtgt	tcaaataatg	480
tacattcctc	ctggtgcacc	acaaccacac	gcatgggatg	attacacgtg	gcaaagctct	540
tcgaatccgt	cagtctttta	cacttatggg	agtgtccac	ccaggatgtc	tataccgtat	600
gtcggtatcg	caaatgcata	ctctcttttt	tatgatgggt	ttgcacgagt	accactgaag	660
gacgaaacag	cggactcagg	tgatactttt	tacgggctag	tcaccatcaa	tgatttttgg	720
accttagcaa	taagagtagt	gaatgaattt	aaccagcta	ggattacatc	aaaaattaga	780
gtgtatatga	aaccaaagca	tgtaagatgc	tggtgcccta	gaccaccacg	tgcagtgcc	840
taccgtggtg	aaggagtaga	ttttaattca	agttcaatca	caccactaac	agcagtcgca	900
aacatcaaca	cattc					915

<210> 42  
 <211> 852  
 <212> DNA  
 <213> Enterovirus  
 <220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> CB2, strain Ohio-1

<400> 42

agcccagtg	aggaatccat	tgagagaagc	attggcagag	ttgctgacac	cattggtagt	60
ggaccatcca	attcggaggc	aataccggca	ctcacagcag	tagaaacagg	acacacatca	120
caggttacac	ctagtgcac	gatgcaaaca	agacatgtgc	acaactacca	ttcaagggtcc	180
gaatccagcg	tagagaactt	cctggcacgc	tcggcttggt	tgttttatac	aacatacacc	240
aacggtaaaa	aaaaaaatgc	cgccaaagag	aagaagtttg	caacgtggaa	agtgagtgtt	300
agacaagccg	cccaactaag	aagaaagcta	gagttattca	catacttacg	ctgtgacatc	360
gaattaacat	tcgtcatcac	cagtgcacaa	gatccatcga	ccgctaccaa	cttggtatgt	420
ccagtgttga	cccatcaaat	aatgtacgtc	ccacctgggt	gtccagtccc	tgaaaccgtg	480
gacgattaca	actggcaaac	atctacaaat	cccagccttt	tttggactga	agggaatgca	540
cctccacgca	tgtcaattcc	attcatgagc	ataggcaatg	cctatagtat	gttctatgat	600
ggttggtccg	agtttaggca	tgacggtgtg	tacggcctga	atacccttaa	caatatgggc	660
acaatatatg	ctaggcacgt	caacgctgac	aaccaggtga	gcataccacg	cacagtgaga	720
atatacttca	aacccaaaca	tgtcaaggca	tggattcctc	gcccgcctcg	tttggcacag	780
tatcttaaag	ccaataatgt	gaattttgag	atcaccgatg	tgacagaaaa	gagagatagt	840
ctcacgacca	cg					852

<210> 43  
 <211> 846  
 <212> DNA  
 <213> Enterovirus  
 <220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> CB6, strain Schmitt

&lt;400&gt; 43

agcccagtg	agggcgccat	agagagagcc	attgcacggg	tcgctgacac	tatgccaagt	60
ggcccaacca	attcagaagc	agtgcctgcc	ctgacagcag	tggaaacggg	ccacacctcc	120
caagtcgtcc	ccagtgataa	catgcaaacc	aggcacgtga	agaagtacca	ttcacgctcc	180
gaaaccagcg	tcgagaactt	tctgtgtagg	tctgcatgtg	tatatattac	cacatataag	240
aaccagacag	gggcgaaaaa	tagatttgct	tcttgggtaa	tcaccacaag	acaagtggcc	300
cagctcagga	gaaaactaga	aatgtttacg	tacttgcgtt	tcgacattga	actcaccttt	360
gtcattacaa	gtgcgcaaga	ccaatccact	atttcccaag	acgcccctgt	gcagacacat	420
cagataatgt	acgtgccacc	gggaggccca	gtgccaacca	aagttgacga	gtatgtgtgg	480
caaacatcca	ccaaccccag	cgtcttttgg	accgagggtg	acgctccacc	acgtatgtca	540
gttcccttta	tgagtatcgg	taatgcttat	agcacatttt	atgacgggtg	gtctgatttt	600
tcaaacaaa	gaatatatgg	gttgaacacc	ttgaacaaca	tgggaacatt	gtacatccgc	660
cacgttaacg	ggcccaaccc	agtaccaatt	accagcacag	tgaggatata	ctttaagccc	720
aagcatgtta	aggcctgggt	gcctaggcct	ccaaggcttt	gccagtacaa	aacgtttagg	780
caagtcaact	ttacagtgcg	tggagtgcac	gagagtaggg	caaataaac	caccatgaat	840
actaca						846

&lt;210&gt; 44

&lt;211&gt; 852

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; E1, strain Farouk

&lt;400&gt; 44

ggtgatgtgc	agaatgctgt	cgaaggggct	atggtcaggg	tggcagatac	agtgcaaaact	60
tcagccacaa	actcagagag	ggtgcctaac	ttgacagcag	tagaaactgg	tcacacttcg	120
caggtagtac	ctgggtgatac	catgcagact	agacatgtga	tcaacaatca	cgtgagggtca	180
gaatctacaa	ttgagaactt	ccttgccaga	tcagcgtgtg	ttttcttcct	agagtacaag	240
acagggacca	aagaggattc	caatagcttc	aacaattggg	tgattacaac	caggcgagtg	300
gctcaactac	gtagaaaact	ggaaatgttt	acttacctac	ggtttgacat	ggaaatcacc	360
gtggtcatta	caagctcgca	agatcagtct	acatcacaaa	accagaatgc	accagtgtca	420
acacaccaga	taatgtatgt	accaccaggg	ggaccatac	ccataagcgt	ggatgattac	480
agctggcaaa	catccaccaa	ccccagtatc	ttttggaccg	aagggaacgc	tccggcacgc	540
atgtcaattc	cattttattag	cataggcaat	gcgtatagta	atttctacga	tgggtgggtct	600
cacttctccc	agactggcgt	gtatggcttc	actactctga	acaacatggg	tcaattgttc	660
ttccggcacg	taaacaagcc	caaccagccc	gctattacaa	gtgtggcgcg	catttacttc	720
aaaccgaaac	atgtacgcgc	ttgggtgcct	agaccacgcg	gcttgtgtcc	atacatcaat	780
agcacgaatg	tcaactttga	acccaagcca	gtgactgaag	tacgtaccaa	cataataaca	840
acgggtgcct	tc					852

&lt;210&gt; 45

&lt;211&gt; 882

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; E2, strain Cornelis

&lt;400&gt; 45

ggagatgagg	tgaagcatga	acccacagtg	gccaacacaa	cagcaagtgg	accatcaaatt	60
tcacaacaag	taccggcact	cacagcagtg	gagactgggc	acacctcaca	ggtgggtcca	120
agcgatacca	tacaaaccag	acatgttcac	aattaccata	gtagaactga	atccaccctg	180
gagaacttcc	tcggaagatc	agcatgcgtg	cacattgact	cgtataagac	caagggagtg	240
accggcgaga	gcacccggta	cgcacatcatg	gagatcacca	ctcgcgagat	ggtgcagctg	300
cggaggaagt	gtgaactctt	cacctacatg	cgatatgatc	tagaaatcac	gtttgtgatt	360
acaagtcgcc	aggagcaagg	ggccaaactg	tcgcagaaca	tgccagtatt	aacacatcag	420
atcatgtatg	tcccaccggg	cgggcctata	ccaaccagca	acgagagtta	cgcttggcaa	480



acgtcaacga	acccaagcgt	gttttggaca	gaaggaagct	cgccaccacg	aatgtcaata	540
cogtttgtta	gcataggaaa	cgcatacagc	aatttctatg	atgggtgggc	gcacttctca	600
caaaacgggtg	cgtatgggta	cacggcacta	aacaagatgg	gtaggatatt	cgtgcgccat	660
gtaaacaaag	agacaccact	gcaagtcata	agcacaatac	ggatgtatat	gaagcccaaa	720
cacgtgcggg	cttgggtgcc	aagaccacca	cgcctgtgtc	catacctgcg	ggcgggtgat	780
ataaactttg	aagtgactga	tgttacagaa	aaacgaaata	acatcaatta	tgtcccaacc	840
ccatcccaca	gcagcagtg	gcacatgcgc	ttgaacaacc	at		882

&lt;210&gt; 46

&lt;211&gt; 879

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; E3, strain Morrissey

&lt;400&gt; 46

ggggacgtcg	aagaggcaat	tgatagggca	gttgcgaggg	tggtcgacac	aatgcccaacc	60
gggccacgaa	acactgagag	cgtgcctgcc	ctgacagcag	tagagacagg	ccacacctca	120
caggctggtt	ctgggtgacac	aatgcagacg	aggcatgtta	agaactatca	ctccaggaca	180
gagtcacaa	ttgaaaactt	cctgtgcagg	gctgcgtgcg	tgtatataac	aacatacaaa	240
tcagctggtg	gaacaccac	agagcgatat	gcaagttgga	ggataaacac	caggcaaattg	300
gtgcagctca	ggaggaaatt	tgagctcttc	acatacttgc	gctttgacat	ggaaatcaca	360
tttgtgatca	caagcacaca	agatcctggg	acacaattgg	cacaagatat	gcctgtacta	420
actcatcagc	tcatgtatat	cccacctggg	ggccctgttc	ctaacagtgc	cacagatttt	480
gcatggcaat	catcaactaa	tccaagtata	ttttggacgg	aaggctgtgc	tccagcacga	540
atgtcggtgc	cgttcacag	cattggcaat	gcctacacca	atttttacga	tggttggtcg	600
catttcaccc	aagaaggggt	ttatgggttt	aactcactga	acaacatggg	ccacatatat	660
gtgaggcacg	tcaatgagca	aagcctgggt	gtctcgacca	gcaccgttcg	cgtgtatttt	720
aaacccaaac	atgtgcgtgc	ttgggtacca	agaccacca	gactgtgccc	atacactaag	780
agttcaaatg	tgaatttcaa	accgaccgct	gtcactgatg	agcgaaagga	tatcaacgat	840
gtaggcaccc	ttcgaccaac	agtgtacact	aaccttgtg			879

&lt;210&gt; 47

&lt;211&gt; 843

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; E4, strain Pesacek

&lt;400&gt; 47

ggagacgtgc	aagatgcagt	gacaggtgct	atagtagctg	tcgctgacac	tctcccaaca	60
gggccctcaa	ataatgaagc	tatacccaat	ttacacagcag	tgagagactgg	ccatacctcg	120
caagtgcacac	caggcgacac	aatgcaaaaca	cgccatgtgg	tgaacatgca	caccgcgtct	180
gagtcgtcca	tcgagaattt	cctggcacgt	tcagcatgcg	tgtactacct	tgattaccaa	240
acgggagaag	ggcccggcga	tcagtatttt	ggccagtggg	ccattaccac	gaggagggtt	300
gcgcaattgc	gtcgaaagct	ggagatgttc	acttatctaa	gatttgacat	ggaaatcaca	360
atcgtgatta	ctagttcaca	ggatcaatct	accatctcga	accagatac	accagttttg	420
acgcacaaa	ttatgtatgt	accaccagga	ggaccaatcc	cagcaaaagt	cgatgattac	480
agttggcaaa	tatccacgaa	tcccagcgta	ttctggactg	aagggaatgc	gcctgcccgr	540
atatccatcc	cattcattag	cgttggaat	gcatacagta	gcttttatga	cgggtgggtcg	600
aacttctcac	aaaacgggcg	gtatggctac	aataccctca	acaacatggg	acaattgttc	660
tttaggcacg	ttaacaaacc	cagcccta	actgtcacia	gcgtcgcccg	catatacttc	720
aagcctaagc	acgtgagagc	ttggatcccc	cgaccaccgc	ggttgtgtcc	atacataaat	780
gcgggagacg	tgaacttcac	tccgacacca	gtgactgaaa	agcgaaagga	cctaataacc	840
acg						843

&lt;210&gt; 48

<211> 843  
 <212> DNA  
 <213> Enterovirus  
 <220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E4, strain DuToit

<400> 48  
 ggagatgtgc aggacgcagt ggctggggcc atagtgcgtg tggctaatac tctcccatca 60  
 ggccccctcaa acaatgagggc tataccccaac ttaacagccg tagaaactgg acacacctcg 120  
 caggtgacac cgggtgatac aatgcagacg cgccacgtag tgaacatgca cactcggtct 180  
 gagtcgtcaa tcgagaactt cctggcgcggt tcagcatgtg tatactacct cgattaccga 240  
 acaggaacgg ggcctggcaa tcaatacttt agccagtggga ctattaccac aagacgagtt 300  
 gcgcagctgc gtcgaaaatt ggagatgttc acctatctaa ggttcgacat ggagatcacg 360  
 attgtaataa cgagttcaca agatcagcct accgtccgaa acccagacac accggtcttg 420  
 acacacccaaa tcatgtatgt gccaccagga gggccaatcc cagcaaaggt cgacgattac 480  
 tggttgcaaaa catccacaaa ccccagtggtc ttctggactg aagggaacgc accagcccgg 540  
 atatccatcc cgttcatcag tgtcgggaat gcatatagta gtttctacga tggatgggtca 600  
 aattttctcgc aaaatgggcg gtatggctac aacaccctga acaacatggg gcaattgttt 660  
 ttcaggcatg tcaataaacc cagtcccaac actgtcacia gtgttgcccg catatacttc 720  
 aagcccaaac acgtgaaggg atgggtcccg cgaccaccgc gattgtgccc ttacattaat 780  
 gctggagatg taaatttcac cccacatcg gtcactgaga agcgagcgag cctgataacc 840  
 aca 843

<210> 49  
 <211> 843  
 <212> DNA  
 <213> Enterovirus  
 <220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E4, strain Shropshire

<400> 49  
 ggggacgtgc aagatgccgt gactggagcc atagtgcgtg tcgccgacac actgcacacg 60  
 ggaccctcga acaacgaagc aatacccaat ttgacggccg tggaaacagg gcatacatcg 120  
 caagtacac caggcgatac aatgcagacg cgtcacgtgg tcaacatgca caccggttca 180  
 gagtcatcaa ttgagaactt cctagctcga tctgcgtgtg tgtattacct cgactatcaa 240  
 acagggtcag gacctggcac ccaatacttc ggccagtggga ccatctccac aaggagagtt 300  
 gcgcaactgc gccggaagtt ggaaatgttc acctacctaa gatttgacat ggaaataaca 360  
 atcgtgatca ccagtctcga agatcactcc accatctcaa atccagatac accaatcatg 420  
 acgcacccaaa ttatgtacgt accaccaggg ggtccaatcc cggcgaaggt cgacgactat 480  
 agctggcaaaa catctacaaa ccctagtgtg ttttggacag aagggaacgc acccgcccgc 540  
 atatccattc cattcattag tgtcggaaat gcctatagca gcttctacga cgggtgggtca 600  
 aattttctcgc aaaacggccg atatggatac aacactttga acaacatggg acaactattc 660  
 ttcagacacg tgaataagcc cagccccaac accttcacia gtgttgcccg tgtatacttc 720  
 aagcccaaac acgtgaaggg gtggattcca cgaccaccgc gattatgtcc atacataaat 780  
 gcgggagacg tgaatttcaa accaacaccc gtgaccgaaa agagggcgag cttaatcacc 840  
 aca 843

<210> 50  
 <211> 876  
 <212> DNA  
 <213> Enterovirus  
 <220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E5, strain Noyce

&lt;400&gt; 50

ggagactcag	agcacgcagt	ggaaagcgcc	gtatctaggg	tggcagatac	aattatgagt	60
ggcccgctcaa	actcccaaca	gggtccccgct	cttactgcag	ttgaaactgg	acacacatcg	120
caagttgttc	caagtgtatac	catccaaacc	agacatgtgc	agaatttcca	ctctaggtcc	180
gagtcgacca	ttgaaaattt	cctgagtagg	tcagcatgtg	tgcataatcg	caattacaac	240
gcgaagggcg	ataagacgga	tgtggacagg	tttgacagg	gggagatcaa	cattcgtgaa	300
atggtgcaac	tacgtaaaaa	gtgtgagatg	ttcacatatc	tacgctatga	tattgaagtt	360
acatttgtta	taaccagcaa	acaggatcag	ggccccaac	taaaccagga	tatgcctggt	420
cttaccacc	aaattatgta	cgtaccccca	ggaggttcag	tacctagcac	cggtgagagc	480
tatgcgtggc	aaacatcaac	aaaccctagc	gtgttttggg	ccgaggggaa	cgctccagct	540
agaatgtcca	taccctttat	cagcataggg	aacgcttata	gtagcttcta	tgatggatgg	600
tcacacttta	ctcaaaaagg	ggtctacgga	tacaacacat	taaacaagat	ggggcagcta	660
tttgtcagac	atgtgaacaa	acagaccccc	acgccagtta	ctagtaccat	aagggtttac	720
ttcaaaccaa	agcacattag	agcttgggtc	cctaggcccc	cgcggttatg	cccctatgtg	780
aacaagacaa	atgtaaactt	catcaccaca	caggtaacag	aacctacaaa	tgacctcaat	840
gacgtgcccc	agtctgagca	taacatgcac	acatat			876

&lt;210&gt; 51

&lt;211&gt; 867

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; E6, strain D'Amori

&lt;400&gt; 51

aacgacgttc	agaacgcggt	ggaacggtca	attgttcgtg	tagcggacac	attaccaggt	60
gggccaaagca	actcagaaaag	cataccagca	ctcacagcag	ccgagactgg	acatacctcg	120
caggctcgtcc	ccagcgacac	catccagacg	cgacatgtga	ggaattttca	cgttcgggtct	180
gagtcacgg	tagagaattt	tcttagcagg	tcagcttgcg	tgtacatcgt	ggagtacaaa	240
acccgggaca	cgactcccga	caagatgtat	gatagctgga	ttatcaatac	caaacaagtg	300
gcgcagttga	gaaggaagct	ggagttcttt	acctatgtca	gattcgacgt	ggaagttacc	360
tttgtcataa	ccagcgtgca	agatgactcc	acaaaacgga	acaccgacac	cccagtgcta	420
actcatcaaa	ttatgtatgt	gccgccagga	gggcccatac	cacaagcggt	ggacgattat	480
aactggcaaa	cttccacca	ccccagcgta	ttttggactg	aggggaacgc	gccaccaagg	540
atgtctattc	cgttcatgag	tgttggcaat	gcatacagta	acttctacga	cgggtgggtcc	600
cactttttctc	aaactgggg	ttacgggttt	aacaccctaa	acaacatggg	taagttatat	660
ttcaggcatg	taaacgacag	gactattagc	ccaatcaaaa	gtaaggtcag	aatatatttc	720
aaacccaaac	acgtgaaggc	atgggtaccc	agaccgccga	gattgtgtga	atacaccac	780
aaggataacg	tggactatga	accaaagggg	gtcacaacat	cacgcacttc	aatcaccatc	840
accaactcca	cacacatgga	gacgcac				867

&lt;210&gt; 52

&lt;211&gt; 867

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; E6, strain Cox

&lt;400&gt; 52

aatgacgttc	aaaatgcagt	cgagcaatca	attgttcgtg	tggctgacac	gttaccaggt	60
ggaccagta	attcagagag	cataccggca	ctgacggccg	ccgagactgg	ccatacttct	120
caagttgtgc	ccagtgtatac	tatacagaca	cgccacgtaa	aaaactttca	tgtgaggtcg	180
gagtcgtcag	tagagaactt	tctcagtagg	tccgcttgcg	tgtatatagt	gggatacaag	240
accacagatg	cgacccttga	caaaatgtat	gacagctggg	ttatcaacac	aaggcaggtg	300
gcgcagctaa	ggagaaaatt	agagttcttc	acctatgtta	ggtttgatgt	tgaggtcacc	360
tttgtgataa	caagcgtgca	agacgattca	actagacgga	acacagacac	ccccgttcta	420

```

accacacaaa tcatgtacgt acccccaggt gggcccatcc cgcaggcagt ggacgactac 480
aattggcaaaa cttccacaaa tcccagtgt ttttggacag aagggaatgc cccaccaaga 540
atgtccatac cattcatgag cgtaggtaac gcatacagca atttctatga tgggtggtct 600
cactttctctc aaactgggggt gtacgggtttc aacaccctga acaacatggg caagctatac 660
ttcaggcatg tgaacggcaa gacaataagc cctatcgcaa gcaaggtag gatttacttc 720
aaaccaaagc atgtgaaggc atgggtgccc agaccaccgc gattgtgtga atacaccac 780
aaggacaatg tggattacga accaaaggga gtcacaacat cccgtacatc tatcacaatt 840
agcaattcca ctcatatgga aacatat 867

```

<210> 53

<211> 867

<212> DNA

<213> Enterovirus

<220>

<221> misc\_feature

<222> (0)...(0)

<223> E6, strain Burgess

<400> 53

```

aacgacgttc agaacgcggt ggaacgggtca attgttcgtg tagcggacac attaccaggt 60
gggccaagca actcagaagag cataccagca ctcacagcag ctgagactgg acatacctcg 120
caggtcgtcc ccagcgacac catccagacg cgacatgtga agaattttca cgttcgggtct 180
gagtcacggt tagagaattt tcttagcagg tcagcttgct tgtacatcgt ggagtacaaa 240
acccatgaca cgactcccga cgagatgtat gatagctgga ttatcaatac cagacaagtg 300
gcgcagttga gaaggaagct ggagttcttt acctatgtca gattcgacgt ggaagttacc 360
tttgtcataa ccagcgtgca agatgactcc acaagacaga acaccgacac cccagtgtct 420
actcatcaaa ttatgtatgt gccgccagga gggcccatcc cacaagcggg ggacgattat 480
aactggcaaa cttccaccaa ccccagcga ttttggactg aggggaacgc gccaccaagg 540
atgtctattc cgttcctgag tgttggcaat gcatacagca acttctacga cgggtgggtcc 600
cacttttctc aaactgggggt ttacgggttt aacaccctaa acaacatggg taagttatat 660
ttcaggcatg taaacgacag gactatttag ccaatcacia gcaaggtcag aatatatttc 720
aaacccaac acgtgaaggc atgggtaccc agaccgccga gattgtgtga gtacaccac 780
aaggataacg tggactatga accaaagggg gtcacaacat cagcacttc aatcaccatc 840
accaactcca cacacatgga gacgcac 867

```

<210> 54

<211> 876

<212> DNA

<213> Enterovirus

<220>

<221> misc\_feature

<222> (0)...(0)

<223> E7, strain Wallace

<400> 54

```

ggcgacaccg aaacggctat tgacaatgca atcgccagg tagcagatac ggtggcgagc 60
ggtcctagta attcgaccag tatcccagca ctcacagcag ttgagacagg tcacacgtca 120
caagtcgagc ccagcgatac agtgcaaaact agacatgtca aaaactacca ctgcggttct 180
gagtcaaccg tggaaaactt tctaagtcgc tccgcttggt tgtacatcga agagtactac 240
accaaggacc aagacaatgt taataggtac atgtcgtgga caataaatgc cagaagaatg 300
gtgcaattga ggagaaagtt tgagctgttt acatacatga gatttgatat ggaaatcacg 360
tttgtaatca caagtagaca actacctggg actagcatag cacaagatat gccgccactc 420
accaccagga tcatgtacat accaccaggt ggcccggtag caaacagcgt aacagatttt 480
gcgtggcaga catcaacaaa ccccagtatt tctggacag aaggaaacgc gccacctcgc 540
atgtctattc cattcatcag tattggcaat gcatatagca acttctatga cgggtgggtca 600
cacttttccc aaaacgggtgt gtacgggatac aacgccctga acaacatggg caagctgtac 660
gcacgtcatg ttaacaagga cacaccatac cagatgtcaa gcacaatccg agtgtatttc 720
aaacccaagc acatccgagt atgggtccca cggccgcctc gactgagccc gtacatcaaa 780
tcaagtaatg taaattttaa cccacgaac ctgacggagc agcgggtcatc catcacatat 840
gtgcccagca ctatacgtcc agatgtgcgc accaac 876

```

<210> 55  
 <211> 843  
 <212> DNA  
 <213> Enterovirus  
 <220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E8, strain Bryson

<400> 55  
 ggtgatgtcc agaatgcagt tgagggggcga atgggttagag ttgcagatac cgtgagcact 60  
 agcgccacca actccgaaca agtgccgaac ctgaccgcgg tggagaccgg tcacacatcg 120  
 caggtagtgc ccggcgacac tatgcagacc aggcacgtag tgaacaagca tgtgcgatct 180  
 gaatctacaa ttgaaaattt cctcgcacgt tcagcctgtg tgtactttct tgagtacaag 240  
 actggtacca agactgactc caacgccttc agcaattggg tcatcacaac gcgcaagggt 300  
 ggcgagctga ggcgcaagtt ggagatgttt acatacttaa ggtttgatat ggagattact 360  
 gtggtcatta ctagtctcca agaccagtcc acatcacaaa atcaaaatgc gcccgtcctg 420  
 actcaccaga ttatgtatgt accacctggt ggcccagtgc ccactagcgt tgatgattat 480  
 tgctggcaaaa catccacaaa cccaagcata ttttggacgg aaggaaacgc acctgccaga 540  
 atgtccatcc cttttatcag catttgaaat gcttatagca acttttatga tgggtggtca 600  
 catttctcag agaacggagt ctatggtttt accaccttaa acaacatggg ccagctgttt 660  
 ttttaggcacg ttaaccaagcc taaccggcg acaataacca gtgtggcccg catttacttc 720  
 aagccaaaac atgtgagggc ctgggtgcct agaccgccac ggttgtgccc ttacatcaac 780  
 agtagcaacg tgaacttcga cccaaaacct gtggcgagagg tcaggtctag catcatcacc 840  
 acc 843

<210> 56  
 <211> 876  
 <212> DNA  
 <213> Enterovirus  
 <220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E11, strain Silva

<400> 56  
 ggtgatgtgg ttgaagccat tgagggcgca gttgctagag tagcagacac tatcagcagc 60  
 ggcccaacaa attctcaagc agtcccagca ctacacagcg tggagactgg acacacctcg 120  
 caagttgtac cagggtgatac catgcagacc agacacgtaa agaattacca ctacgatca 180  
 gaatcgacca ttgaaaattt tctgagtagg gcggcttgtg tctacatggg tgagtattac 240  
 actacaaata cagatgagac caagagattt gctaattgga caatcagcgc aaggcgcatg 300  
 gtacaaatga ggaggaagct tgaaatgttc acgtacgtcc gtttcgacgt ggaggtgaca 360  
 ttcgtaatta ccagcaaaca ggaccaaggg aatcggttgg gacaagatat gcccccgctc 420  
 acacaccaga taatgtacat cccgccaggt ggtcgtatac ccaaattccac cacagattac 480  
 gcatggcaaaa cgtcgacaaa ccccagcatc ttttggacgg agggtaacgc gccccccagg 540  
 atgtccattc ctttcatgag catttgaaac gcatatagca atttttatga cggttggtct 600  
 cacttctctc aaaatggcgt gtacggatat aacacactaa accacatggg tcaattatac 660  
 atgcgccatg taaatggacg atcacctctt ccaatgacca gcacggtgag ggtgtacttc 720  
 aaacccaaac atgtgaaaac atgggtgcc aaccccccaa gattgtgcca atacaaaac 780  
 gcctcgacag taaacttttc acccacaac atcacagaca agagggatag catcacttac 840  
 attccagaca ccgtgaaacc cgacatgaca acatat 876

<210> 57  
 <211> 861  
 <212> DNA  
 <213> Enterovirus  
 <220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E13, strain Del Carmen

&lt;400&gt; 57

ggggatgaga	gtgcaaaggc	tacagtttcc	aacacacagc	ctagcgggtcc	aagtaattct	60
gtcagcgtgc	caatgcttac	tgctgctgag	accgggcaca	catctcaagc	agtacccagt	120
gacactatac	agaccaggtg	cgtagtgaac	caacacaagc	ggtcggaatc	atccgtggaa	180
aatttcctgt	gtcgtccgc	ttgctgtatac	tacacaacct	atgacactca	cggggatgca	240
gccgacgcaa	agtacgccag	ttggacgata	accacccgaa	aagctgcaca	gctgcggaga	300
aaactagaga	tgttcacata	cttgagggtt	gatttagaag	tgacattcgt	tataacaagt	360
gcacaagtaa	catctacca	taaacgtcag	gacacgcctg	ttctcacgca	tcaagtcagt	420
tacgtgccac	caggtgggtg	agtacccgct	agtgtggacg	attatgcgtg	gcagacgtcc	480
acaaacccaa	gtatcttctg	gacggaagg	aatgcaccag	cacgcatgtc	tatacccttt	540
atcagcgtgg	gcaacgcata	cagtagcttc	tatgatgggt	ggccaactt	tacacagaat	600
ggagtttacg	ggttcaaac	gctaacaac	atgggaaagc	tatacgtacg	acacgtcaat	660
ggagctagcc	ccggccctgt	gaagagtacc	atacggtttt	acatgaagcc	caaacacgtg	720
aaggcttgga	taccagacc	tcctcgcttc	tgcgagtacg	aaaaatcagg	caatgtaaac	780
ttcaaaccga	aggcggtgac	agagagccgg	acgtctatca	aattagaaaa	accaaaccct	840
gcgtccaaat	taatgaacca	c				861

&lt;210&gt; 58

&lt;211&gt; 894

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; E14, strain Tow

&lt;400&gt; 58

aatgatccag	agcaagctat	aaatcggg	ctagcggagg	tggcagacac	agttcgtagt	60
gggccgtcta	actctgaaca	aattcccgca	ctgacagccg	tggagacagg	gcatacatca	120
caagtcgtcc	ccagtgcac	aatgcaaacc	cggcatgtga	agaattacca	ctccagggtca	180
gagtcaacaa	tagagaactt	tttgtgtaga	tcggcttgcg	tgcacatcgc	aacatacaag	240
gctaaaggcg	gagctggaga	cgtagaccg	tacgacagct	gggacataaa	cataaaagag	300
ctggtacagt	tgcgacgcaa	gtgcgagatg	tttacgtacc	taagggttga	tatggagggtc	360
acctttgtga	ttaccagcat	cgttccaccg	ggcgggtgcc	tgccctagtgg	tgcaaaagc	420
ctaacgcacc	aaataatgta	cgttccaccg	ggcgggtgcc	tgccctagtgg	tgcaaaagc	480
tttgcgtggc	agtcacaa	gaatcccg	gtgttctgga	cagaaggcaa	tgcaaaagc	540
cgtatgtcta	taccctttat	aagtattggg	aacgcttaca	gtaatttcta	tgatgggtgg	600
tcccacttta	cccagaacgg	tggttacggg	tacaacacac	taaacaaact	gggtaagatc	660
tacgtcaggg	atgtgaacaa	acaaaccccc	acggatgtca	ccagcaccgt	gcgaatttac	720
ttcaagccca	aacacgtg	agcttgggtg	cctcgccggc	ctagactatg	tccttataag	780
aacaaggcaa	atgtaaactt	tgaagttact	agtgtaacca	ctgccagaac	gagtcctta	840
gatgtcccca	ctcccaacca	cagtagtagc	gtgcacctgc	gcac		894

&lt;210&gt; 59

&lt;211&gt; 882

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; E15, strain CH96-51

&lt;400&gt; 59

ggtgatgacc	aacacaagac	caatacagtg	acagacacag	agcagagtg	cccgtcaa	60
tccgaacgcg	tcccagccct	cacagcagtg	gagactggcc	acacttcgca	ggtcgtaccc	120
agcgacacag	tgcaaaactc	ccacgtacgc	aattaccact	caaggacaga	gtctacctta	180
gagaattttc	ttggtaggtc	agcatgtgtg	cacatcgaca	catacaaggc	taagggtgaa	240
aaaggatctt	ctgagaggta	cgcgtcatgg	gagataacta	acagggagat	ggtgcaattg	300
cgccgaaaa	gtgagatgtt	cacatatatg	aggtatgacg	tggaaataac	atttgtgata	360
accagctacc	aggagcagg	cacacgattg	gccaggaca	tgccgtgtact	aacacaccaa	420
atcatgtacg	tgcccccg	tgggcctgtg	ccaacaagca	cggagagcta	tgcatggcag	480

acctcaacga	accctagcgt	cttttggact	gagggcaacg	caccaccgcg	tattttccata	540
cccttcatca	gcataggaaa	tgcgtactgc	aacttttatg	atgggtgggtc	acattttctca	600
caagatgggt	cctatggcta	cacagcgctc	aatagaatgg	ggaaaatata	tattagacat	660
gtaaataagg	agacccccac	acaggtcatt	agtaccgtga	ggatgtacat	gaaacccaaaa	720
cacattcgcg	catgggtgcc	cagaccccc	cggctgtgca	aatacctaca	ctcaggcaac	780
atgaacttca	acgtggagga	cattacagag	gagcggaacg	atataaacca	tgtacccacc	840
cccagccaca	gcagtagtgt	gcgtgtgcgt	cttggcacca	ca		882

<210> 60  
 <211> 867  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E17, strain CHHE-29

<400> 60						
ggtgatgttg	aggactcagt	aaacagagca	gtgggttaggg	tagcagacac	catgccaaagt	60
ggaccatcca	attcgcaggc	agtacctgcc	ttgacagccg	ctgagacagg	tcacacgtct	120
caagtgggtg	ctgggtgata	catccaaaca	cgtcatgtgc	acaactacca	ctccagaact	180
gaatccagta	tcgaaaattt	cttcgggcgt	tccgcatgtg	tagtgggtcaa	aacatataaaa	240
atgggtcaaa	aagttgtagc	tacagacaga	tatgatagtt	ggatgatttc	cattagggac	300
atggtacaac	taagacggaa	gtgtgaaatg	ttcacgtaca	tgagatttga	tttagagatc	360
accttcgtgg	tcacgagtta	ccaacaatat	agtacatcct	tgacacagga	catgccagtg	420
atcacgcac	agttcatgta	tgtgccgcct	gggggtccgg	ttcctgagag	tgtaaatagc	480
tacgcttggc	aaacgtcaac	caatcccagt	atattctgga	ctgagggtaa	tgccccagca	540
aggatgtcca	ttcccttcac	cagtgttggg	aacgcataata	gctgcttcta	cgatgggtgg	600
tcacacttca	cacagaaggg	ggtttatggt	tataaacatc	tcaacaacat	gggcaaattg	660
tacatgcgac	acgtgaacaa	aaatagcccc	acagagatca	taagcactct	tcgtgtgtat	720
ttcaagccaa	agcacgtgaa	agcgtgggta	cccagaccac	ccaggctatg	tccatacaaa	780
tataaggcaa	atgttgactt	tgaagtgact	ccaatcacag	acaagcgaga	ctccataacc	840
agcataccag	tccccaaagca	cactcat				867

<210> 61  
 <211> 861  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E18, strain Metcalf

<400> 61						
ggggataacc	aggatcggac	ggtcgccaac	acacagccta	gcggtccgctc	caactccacg	60
gaaattccag	ccttaacagc	ggtggaaacg	gggcacacct	cacaagtgga	tcccagtgac	120
actatccaga	ccaggcacgt	ggtaaaacttc	cactcacgtt	ctgagtcac	tatagaaaat	180
ttcatggggc	gtgcagcatg	tgtgttcattg	gatcagtata	aaatcaatgg	agaagagacg	240
tccactgata	ggttcgcagt	gtggaccata	aacataaggg	agatggccca	attaagaagg	300
aagtgtgaaa	tgttcacgta	catgcgtttt	gatatcgaga	tgacaatggg	cattaccagc	360
tgtcaagacc	agggaaacgat	actagatcag	gacatgcctg	ttttgacgca	tcaaattatg	420
tacgtcccac	cagggggccc	aatcccagcc	aaagtagata	gttacgagtg	gcagacatca	480
acaaacccca	gcgtcttctg	gacggaaggt	aatgcaccac	cgcgatgtgc	tattccattc	540
attagcgtcg	gcaatgctta	tagctcattt	tacgatgggt	ggtcacactt	cacacaggac	600
ggtacctatg	ggtatacaac	ccttaatgca	atggggaaac	tgtacattag	gcattgtgaat	660
aggagcagcc	ctcatcagat	aaccagcacg	atcagagtat	acttcaaacc	caaacacatc	720
aaggcatggg	tgccccgacc	accacgattg	tgcccgata	taaacaaaag	ggacgtaaac	780
tttgtagtca	cggagataac	agactcaagg	acttccatca	ctgatacacc	acaccagaa	840
catagtgtcc	tggcaacgca	t				861

<210> 62

<211> 879  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E19, strain Burke

<400> 62

ggagacatcg	tggaggctgt	ggagggagcc	atctcgcgag	tggcagatac	tgtagtagt	60
gggcccagta	actctcaagc	agtaccagcc	ctcacagcag	tcgaaacggg	tcacacttct	120
caagtcaatc	ctagtgcacac	catgcagacc	agacacgtga	caaattacca	ctcgcggtca	180
gaatccagca	tagaaaattt	ccttagccgc	tctgcttggt	tgatatatggg	cgaatacagc	240
acacaagcat	cagatgcagac	caaaaagtac	atgtcatgga	ccataagccc	aaggaggatg	300
gttcaaagtc	gcagggaagt	tgagctcttc	acttacctgc	gttttgatgt	ggagattact	360
tttgtaatca	ccagcagaca	agtcaaggta	gggacacaat	taggccaaga	tgcccccccg	420
ctaactcacc	aagtcacgta	tataccccca	ggaggcccag	tacctgattc	agttggtgat	480
tacgcacggc	agacttccac	taaccctagt	atcttttgga	ccgaaggtaa	tgcatcacc	540
aggatgtcaa	tacccttcat	tagcataggt	aacgcctata	gcaactttta	tgacgggtgg	600
tgcgattttc	accagaatgg	cgtctatgga	tacaacacgc	tgaaccatat	ggggcaactg	660
tacgtgcggc	atgttaacgg	cccttcacca	ttaccagtga	caagcacagt	cagggtctac	720
tttaaaccca	aacacgtgaa	ggcttgggta	ccgagggcac	ccaggctatg	tcaatatgta	780
aatgcaccca	ctgtgaactt	cgagccaaca	gacatcactg	agtcacgcac	tgacatcaac	840
catgttccag	acaccgtgaa	gccagatctc	caaacatac			879

<210> 63  
 <211> 843  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E20, strain JV-1

<400> 63

ggggacgtgc	acgatgcggt	ggttggggcc	atgacccgtg	ttgcagacac	gataagtagt	60
gggccaagca	attcagaaaag	cgtgccagca	ttgactgcag	ccgagacagg	acacacatca	120
caggtagtac	cgagtgcatac	catgcagacc	agacatgtgc	ggaatttcca	cacaagatca	180
gagtcctcaa	tagaaaattt	catgagtcgc	tccgcctgtg	tctactatac	taagtataag	240
accaaagacc	cggacccaac	ggagatgtac	tctagtgtga	agggttaccac	caggcaagtg	300
gcacaactca	ggaggaagat	ggagatgttc	acttatttgc	gctttgacgt	agaagtgaca	360
tttgtaataa	ctagctcgca	agatcagtc	acgagtgttg	cacaggacgc	acctgttctc	420
actcaccaaa	tcatgtacat	cccaccgga	ggcccgggtc	ccaaatcagg	tagggattac	480
tcatggcaat	cctgtactaa	cccaagtgtt	ttctggactg	agggtaatgc	accaccacgc	540
atgtgtattc	cgttcattag	tattggaggg	gcataatagt	cattctatga	cgggtggtcc	600
cactttaacc	aacaagggtc	gtacgggtat	aacactctca	atgacatggg	tcaactgtat	660
tttaggcacg	tgaacgaggg	tagcccaggg	gcggtataca	gctacatcag	aatatacttc	720
aaacctaacc	atattagagc	atgggtgccc	agaccaccta	gattgtgtca	gtatgagaaa	780
caagggagcg	ttgacttcaa	ggtgcaggga	gtaactgatg	ctcgtacctc	gctcaccact	840
aca						843

<210> 64  
 <211> 885  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E21, strain Farina



&lt;400&gt; 64

aatgacccag	cacaagccgt	gttgagtgcg	atcggtcgtg	tcgctgacac	cgtcgctagc	60
gggccatcga	attcagagag	agttccagtt	ctaaccgctg	cggagacagg	tcataacctca	120
caggtggttc	ccagcgatac	cattcagacg	cgccacgtcg	tcaacttcca	cacaagatcg	180
gagtcaacaa	ttgaaaatth	tatgtgtcgc	tccgcctgcg	tgtacatcgc	ccggtacggt	240
actgaaaagc	aaggggaaca	aatatccaga	tacaccaagt	ggaagatcac	cactaggcag	300
gtggcgcaac	tgcgcaggaa	gatggagatg	ttcacatata	tgcgatttga	tttggaaatg	360
acatttgtaa	tcacaagctc	ccagcgtatg	tcaacggcat	atgattcaga	cacaccagcc	420
ctcaccacc	aaataatgta	cgtgccacct	ggggggcccg	agccccgtca	ttatgaggat	480
ttcgcttggc	agacatccac	aaatccaagc	atatttttga	ccgaaggtaa	cgcaccacca	540
cgcttatcaa	tcccatttat	gagtgtggga	aatgcctatt	gcaattttta	tgatgggtgg	600
tctcactttt	cacaaagtgg	agtgtatggg	tttaccacct	taaataacat	gggacaactg	660
ttcatgcgcc	atgtcaataa	gtcaacagcg	cacccattg	atagtgtggt	gcgagtttat	720
tttaaaccac	agcatgttaa	ggcgtgggtt	ccaagacctc	cccggttgtg	cccatacatc	780
tatgcaagga	acgtggattt	tgagccacaa	ggtgtcactg	aatcaagaga	aaagataaca	840
ctagataggg	atactcacac	ccctatgcgc	acatgcgggc	cgttc		885

&lt;210&gt; 65

&lt;211&gt; 882

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; E24, strain De Camp

&lt;400&gt; 65

ggagatgtct	gtgaggaagt	agagagggct	attgtcaggg	ttgcagatac	tgtcggacgc	60
ggtcctgcta	acactgagag	tgtaccagcg	ctgactgcag	ttgaaactgg	acacacttca	120
caagttgtac	ccggggacac	catgcaaacc	agacatgtta	aaaactttca	cacgcggtca	180
gaatcatctg	tggaaaaatth	catgtgcaga	gcagcgtgtg	tgtattatgt	ggattaccac	240
acacaaaatg	acagtgagga	tgaaaaatat	gcatcttggg	ttatcaacac	gagacaggta	300
gcacagctac	gcaggaaaaat	tgagctgttc	acatacacta	ggtttgatgt	cgaaatcaca	360
ttcgtgatca	ccaccacaca	gcagcaatcc	acagctccca	accccgacac	tcctctgctg	420
acacaccaa	tcattgtatgt	gccccgggt	ggcccagtg	caaatagtgc	taccgattat	480
tggttgcaat	catccacaaa	tcccagtata	ttctggaccg	agggtagcgc	accacccaaa	540
atgtcaatac	cctttataag	tgtgggaaat	gcatacagca	gtttttatga	tgggtgggtca	600
catttcactc	aaaacggggt	gtacgggttc	aacactctga	acaatatggg	caaattatac	660
ttcaggcacg	taaatgacaa	caccgtaggg	ccatatgtga	gcaaagcccg	cattttatttc	720
aaaccaaagc	atgtgcgtgc	gtgggttccc	aaacctccca	ggctctgtga	atacaacaat	780
cgagccaacg	tgaactttga	accacgaggg	gttaccgatg	ccaggtctag	tatcacgggc	840
acaaccgaca	cgatcactga	gagcacaggg	atgcaaacga	ct		882

&lt;210&gt; 66

&lt;211&gt; 876

&lt;212&gt; DNA

&lt;213&gt; Enterovirus

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (0)...(0)

&lt;223&gt; E25, strain JV-4

&lt;400&gt; 66

aatgatccag	caactgccat	agttagatcg	gttgagagag	tggctgatac	catagcaagt	60
ggacccacta	actcagagag	agtgccagca	ctaaccgccg	ttgaaacagg	tcacacctca	120
caggtagtcc	cgagcgacac	catgcaaact	aggcatgttg	tgaaccatca	cattagatca	180
gagtcctcta	ttgaaaactt	cctgagcagg	tccgcctgcg	tgtacatcga	catgtatggg	240
acaaaagaga	atggtgacat	caagcgcttc	accaactgga	gaataaacac	acgtcaggtc	300
gtgcagctaa	ggcgcaagct	ggaaatgttt	acatacatta	gatttgatgt	tgaatacact	360
tttgtaatac	ctagcacaca	gggaacaccg	actcaaaaga	acaaggatac	cccagttcct	420
acacaccaa	tcattgtatgt	gccaccaggg	ggcccaatcc	ctgtatctta	tgaagattat	480

tcttggcaga	cctctacaaa	tcctagtgtt	ttctggacag	aaggggaatgc	cccagcccgt	540
atgtcaattc	ccttcatgag	cgtagggaac	gcctattgta	actttttacga	cgggtgggtca	600
cactttctac	aatcgggtgt	gtatgggttc	actacactca	ataacatggg	tcagttgtac	660
tttcgacacg	tgaacaagga	cacccttgga	ccatacaata	gcacgggttcg	ggtttacttc	720
aaacccaaac	atgtgaaggc	atgggtaccc	agaccaccgc	gcctgtgcga	ctacgtttac	780
gcacataatg	ttgacttcac	accaaaaggg	gttactgaca	gcagggacaa	gatcaccctg	840
gaccgtgatg	aacacgtgcc	gtcagtgtgt	aaccac			876

<210> 67  
 <211> 870  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E26, strain Coronel

<400> 67						
ggagatgatc	caccgcattc	gatctcaaac	acggttgcaa	acaccaaccc	tagtgggtcca	60
accaactcag	aaaggatccc	agcgctcaca	gcagcggaac	ctgggtcacac	ctcgaggtg	120
gtcccagatg	ataccgtaca	aactcgttgt	gtgaaaaact	tccacactcg	atcggagtca	180
tcaattgaga	actttttgtg	cagatcagct	tgcgcacaca	tgtcatcgta	tgaggccttc	240
ccaacaacaa	cacaagacgg	tacacaaagg	ttcgccaatt	ggacgattag	tgtgaaagac	300
atggtgcagt	tgaggaggaa	atgtgagatg	ttcacgtact	taagatttga	catggaggtg	360
acttttgtga	taactagtgt	gatcgaaact	acaaaaggga	aagtaccggc	accagcagtc	420
acacaccaag	taatgtacat	tccaccaggc	ggacctattc	cagctagcgt	tgaaagtatt	480
gcctggcaaa	catccaccaa	cccaagcgtg	ttttggacag	aaggggaatgc	tccccacgc	540
atgtctatac	catttatcgg	catttggtaat	gcctacagca	tgttctatga	cggatggggcc	600
agtttcagac	aatcgggtgg	atatggatac	agcaccctga	accacatggg	ccagatatc	660
gtaagacacg	tgaatgcaac	cataccaaac	ttgatcagca	cagtcaggat	atatttcaag	720
cccaagcacg	ttagggtctg	gattcctaga	ccgcccaggg	tgtgtcagta	catttacaag	780
gcaaagttag	actacgcagt	gtcaaatac	actgaaaagc	gagatagtat	aagatggaca	840
ccaacaaccc	gtccgtcaat	gacatccac				870

<210> 68  
 <211> 855  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E27, strain Bacon

<400> 68						
ggtgacgacg	caaggactgt	tagcgacaca	caaaagagcc	agccatctaa	ctctgagcaa	60
gtgcctgcct	taacagcggg	tgagactgga	cacacctctc	aagttgagcc	cagtgatata	120
gtacagacac	gacatgttgt	caactcacac	agtaggacag	agtcgacaat	tgagaatttc	180
tttgggaggg	ctgctgttgt	gaggggtgaga	gagtactcta	tagggcatga	tttggcagcg	240
gacgaaacat	atgatagctg	ggccattaca	gtgcgagaca	tggtgcagct	tcgtaggaag	300
tgtgagatgt	tcacatacat	gaggtttgac	ttggaagtga	cgctagtcat	caccagctat	360
caagaaccag	ggacaatcac	cacccaggat	atgcccgtcc	taaccaccca	gattatgtat	420
gtgccgccag	gaggcccggg	cccagccaag	gctgacagtt	acgcgtggca	aacgtcaaca	480
aatcccagta	tattctggac	cgaaggcaac	gctccacctc	ggatgtctat	cccatacatt	540
ggcatcggca	atgcatatag	cagcttttat	gacgggttgt	cgagcttcaa	caactcgggt	600
gtgtatggct	acacaaccct	gaataacatg	ggtaaactgt	acttcagaca	cgtgaacaaa	660
cacagcccaa	acactattaa	gagcactgtg	aggatatatt	tcaagcccaa	gcacgtccag	720
gcgtgggtcc	caagaccacc	gcgcttgtgc	ccgtatctga	ataagagggg	tgtcaacttt	780
gaagtgaac	ccgttacgag	caagagagac	agtattaact	gggtgccaca	aacaaaccgc	840
caagtgtata	atcat					855

<210> 69

<211> 876  
 <212> DNA  
 <213> Enterovirus  
 <220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E29, strain JV-10

<400> 69  
 aatgaaccta gtagtgccat tgagagagca attgtgcgcg tagcagatac tatggccagt 60  
 gggcctgcaa actcagagca aatccctgcc ctaaccgctg ctgagactgg tcacacctcg 120  
 caagtgggtc ccagcgacac tatgcaaacc cgccatgtat gtaactacca caccagatct 180  
 gaatcatcga tcgagaactt cctatgcagg gctgcatgtg tctacatagt gagttacaaa 240  
 acacagggcg acgaacaaac cgacaaatac gctagtggg agatcaacac gcggcagggtg 300  
 gcacagttaa ggagaaaatt ggaattcttt acttacataa gatttgacat ggaggaataa 360  
 tttgtgatca ctgggttcaca agacaccagc acacagacta acacggatac gccagtgtgta 420  
 acccatcaaa ttatgtatgt gcctcccggg ggtccagtac cgacatcagc cacagattac 480  
 agctggcaga catctacaaa tcccagtggtg ttctggacag aagggaatgc gcctcccgtg 540  
 atgtccatac ccttcatgag cataggcaat gcgtatgtcta atttctatga tgggtgggtcg 600  
 cactttagcc agtcaggggtg gtagtggtac accacactca ataatatggg taccctgtat 660  
 ttcaggcacg tgaacaactc gaccatcggtg ccttacacca gtgcagttag gatataatttc 720  
 aagccaaagc acgtcaaagc gtgggtgccca cgaccgccac ggttgtgcga ttacaaacac 780  
 aaaaagaacg tagactttac tcccacaggt gtgaccacaa ctagagacaa gataaccttg 840  
 gacaagggga ctcacgtgac gagcgtatgg aacaca 876

<210> 70  
 <211> 876  
 <212> DNA  
 <213> Enterovirus  
 <220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E30, strain Bastianni

<400> 70  
 aatgaccccc aaggtgcact taataaagca gtgggcaggg tagctgatac tatagctagt 60  
 gggcccgtca atacagagca aattcctgca ttgacagcag tggagacagg gcatacatct 120  
 caagtgggtc ctagtgcac aatgcaaacc cgacacgtgg tcaacttcca tactagatca 180  
 gagtcacgtg tacagaactt catggggaga gcggcatgtg tatatatcgc ccactatgcc 240  
 acagaaaagg ctaatgatga tttggacaga tacactaact gggagatcac aactaggcag 300  
 gtggcacagt tgaggcgcaa gttggagatg tttacgtata tgagatttga cctcgagatt 360  
 acattcgtaa tcaccagctc ccagcgtact tccaacaggt atgcgtcaga ctccccccca 420  
 ttaacacatc aaataatgta cgtgccgcgg ggggggtccaa ttcccaaggg ttatgaagac 480  
 tttgcctggc agacgtccac caacccaagt gtgttttggg ccgaaggtaa cgccctcct 540  
 aggatgtcaa taccattcat gagcgttggc aacgcataat gtaactttta tgatggatgg 600  
 tcccatttca gtcagagcgg tgtgtacggg tacactacat tgaacaacat ggggcgctta 660  
 tatttttagac atgtaaacaa atcaacagga taccagtaa atagtgtcgc ccgcgtctat 720  
 ttcaagccca agcatgtgaa ggcatgggta cctcgcgcg cagcgttatg tccatatttg 780  
 tatgtataaa atgtcaactt tgatgtgcaa ggcgtgaccg agtcccgggg taagatcact 840  
 ctcgaccgtt cgactcacia ccccggtgta accact 876

<210> 71  
 <211> 876  
 <212> DNA  
 <213> Enterovirus  
 <220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E30, strain Frater

<400> 71  
 aatgaccctg aaggtgctg caacaaggcg gtgggcagag tggctgatac aatagccagt 60  
 gggcccgtca acactgagca aattcccgcg ttgacagcag tggaaacagg gcacacatct 120  
 caagtagtac ctagtgatac aatgcaaact cgacacgtgg tcaacttcca caccagatca 180  
 gaatcatcgt tggagaactt catgggaaga gcagcgtgtg tgtatatcgc tcattatgct 240  
 acagagaagg ctaatgatga tttagacaga tacaccaact gggagggtcac aaccaggcag 300  
 gtagcacagt tgaggcgtaa actggagatg ttcacgtaca tgaggtttga cctcgagatc 360  
 acatttgtaa tcaccagctc ccagcgcaact tcaaccaagt atgcgtcaga ttcccccca 420  
 ctaacacacc agataatgta tgtaccgccg gggggcccga tccccagggt ttatgaagat 480  
 tttgcctggc agacgtccac caaccgaagt gtatttttga cggaaggtaa cgccccccct 540  
 aggatgtcga taccattcat gagcgttggt aacgcatact gcaactttta cgacggatgg 600  
 tcccatttca gccagagcgg tgtgtacggg tacactacat tgaacaacat ggggcacttg 660  
 tatttcagac atgtaaaca atcaactgca taccagttta acagtgttg cgcgtctac 720  
 ttcaagccca agcacgtaaa ggcttggtg cctcgcgcg cagcgttatg tccatatttg 780  
 tatgcaaaaa atgtcaattt tgatgtacaa ggtgtgaccg agtctcgggg aaaaatcact 840  
 cttgatcgat cgactcaca ccctgtgtca accacg 876

<210> 72  
 <211> 877  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E30, strain Giles

<400> 72  
 aacgaccccg aacatgcgtt aaacaacgcc attggtagag tggcagatac gatcgccagt 60  
 gggccggtga actcggaacg catacctgca ctaaccgcag tggagacagg acacacgtct 120  
 caagtgggtg caagcgacac catgcaaaca aggcacgtag tcaacatgca tacaagatcc 180  
 gaatccacca tcgaaaattt catgggaagg gctgcttggt tatacattgc gcaatacgcc 240  
 actgataagg ccagtgatga tctggacagg tacaccagct gggagatcac tacgagacag 300  
 gttgcgcaat tgaggagaaa gctggagctg ttacataca tgaggatga cttagaagtt 360  
 acctttgtca ttaccagttc ccagcgcaact tcgactacat atgcatcaga ctccccgcca 420  
 ttgacccacc aaattatgta tgtgcctccc gggggcccta ttcccatagg acacgaagac 480  
 ttcgcctggc agacttcaac aaaccccagt gtcttttggg ctgaaggaaa tgccccacca 540  
 cgtatgtcca taccattcat gagggtgggc aatgcctact gcaattttta cgatgggtgg 600  
 tcacatttta accagagtgg ggtgtatgga tacactacac taaacaacat gggtcgctta 660  
 tatttcaggc atgtaaacag atctactgcc tacccagttt atagtgttg acgtgtttac 720  
 tttaaacca aacacgtcaa agcctgggtc ccacgagcac cagcattgtg cccatacttg 780  
 tatgctaaga acgtgaactt taatgtgcaa ggtgtgactg actcccgaga caagataacc 840  
 gtagaccgaa ccaaccatgt acgtatgcgc accacg 877

<210> 73  
 <211> 876  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E30, strain PR-17

<400> 73  
 aacgaccccg aacacgtggt aaacaatgcc gttggcagag tggcagatac aatcgccagc 60  
 gggccggtga actcggaacg cgtacctgca ctaactgcag tggagacagg gcatacgtct 120  
 caagtgggtg caagcgatac tatgcaaaca agacacgtag tcaacatgca cacaagatct 180  
 gaatccacta tcgaaaattt catgggaagg gctgcttggt tatacatcgc acaatacgct 240  
 actgacaaag ccagtgcaga tttggatagg tacaccagct gggaaatcac cagagacag 300  
 gttgcgcaat tgaggagaaa gttggaaatg ttacataca tgaggatga cctgggaagtc 360  
 acctttgtta tcaccagttc ccagcgcaac tcgactacat atgcatcaga ttccccacca 420  
 ttgactcatc agatcatgta cgtgcctccc gggggcccca ttcttatagg atacgaggac 480

ttcgccctggc	aaacatcgac	taaccctagt	gtcttttggg	ctgaaggaaa	tgccccacca	540
cgcatgtcca	ttccatttat	gagtgtgggc	aatgcctact	gcaattttta	cgatgggtgg	600
tcacacttta	gccagagtgg	ggtgtacgga	tacactacac	taaataatat	gggtcgtctg	660
tatttcaggc	atgtaaacia	atctactgcy	taccggtta	atagtgttgc	acgtattttac	720
ttcaaaccga	aacatgttaa	agcctgggtc	ccgcgagcac	cacgactgtg	cccatatttg	780
tatgcaagga	acgtgaactt	taatgtgcaa	ggtgtgactg	actcccagaga	aaagataacc	840
atagaccgaa	ccaaccatgt	gcccattgct	aacaca			876

<210> 74  
 <211> 876  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E31, strain Caldwell

<400> 74						
ggggacacgg	aacatgcagt	tgagtcagct	atctccaggg	tagcagatac	cattagctca	60
ggtcctagta	acactgttgc	tataccagcg	ctcaccgcyg	cagaaacggg	ccacacatcg	120
caagtcaccc	ccagcgacaa	tcttcagacg	cgccatgtta	agaactatca	ctcccgtctc	180
gagtcaacta	ttgaaaactt	cctgtgtaaa	tccgcygtgtg	tgcataattgc	gtcatacaac	240
gcatacgggtg	atgttggatc	agacagtaga	tatgatagtt	gggagatcaa	catcagggaa	300
atgggtgcagt	taaggaggaa	gtgcgaaatg	ttcacctatc	tcagatttga	catggaggtg	360
acattttgtca	tcactagcaa	gcaagatcaa	gggacttcgc	tatcacaaga	catgccagtg	420
ctaacacatc	agatcatgta	cgtgcccgcca	ggcggatccg	tgcccactag	cgtccagagc	480
tacgcatggc	aaacatccac	caacccgagc	gtgttttggg	cagagggcaa	tgcccctgct	540
agaatgtcca	tcccattcat	tagcataggg	aatgcataca	gcagcttcta	cgacgggtgg	600
tcacattttca	cccaacaagg	tggctatggc	tataatacac	tgaacaagat	gggtaagttg	660
tttgtaaggc	atgtgaataa	agaaacacca	acccatgtga	cgagcacgat	acgtgtatat	720
tttaaaccga	agcatgttag	agcgtgggtg	ccaaggccac	ctagattgtg	cccgtacatc	780
aataaagcgg	actgtaactt	cgtgtgtaca	ccactcacca	aacagcgggt	aggaatcaac	840
gatgtcccg	ggcccagcca	cacattacat	actcat			876

<210> 75  
 <211> 875  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E32, strain PR-10

<400> 75						
aacgaccccg	caaccgctat	tgaaggagca	gtccggcgag	tggcggacac	gatccagagc	60
ggaccgagca	attcgagcgy	ggttcagcgy	ttaacggccg	ttgagacagg	tcacacagca	120
caggttacc	cgagtgtac	aatgcaaact	agacatgtac	acaacttcca	caccagatcg	180
gagtctagca	tcgagaactt	cctcagtaga	gcagcttgtg	tgtacatagg	gaaatatagt	240
agcaatgcaa	caacacaaga	tgaacaatac	atgtcatgga	caattaatac	cagacagatg	300
gtgcagctga	gacgcaaatt	cgaaatgttc	acctacctac	gcttcgacgt	agaagtact	360
tttataataa	catcgacca	agatcaaggg	acacagttca	accaggatgc	gcccgtaatg	420
tgccacaaaa	tcatgtatgt	gccacctggt	ggcccgggtg	ctaagagtgt	tgatgacttc	480
acatggcaaa	cctctactaa	ccttagtgtc	ttttggtcag	aaggcaatgc	accaccgaga	540
atgaccattc	cattcattag	tatagggaac	gcctacagca	gcttttatga	tggctgggtca	600
cacttctctc	aaaatggggt	ttacgggttt	aatgcactca	ataacatggg	taaactgtat	660
gtgagacaag	tgaacctaaa	agcccctatg	ccagtcagca	gtacagttag	gatctatttc	720
aaacccaagc	atatcaaagc	ttgggtaccc	agaccaccgc	gtctatgtaa	gtacctgaag	780
tctgggagtg	tcaattttga	gcccactgat	ttgacagaaa	aacggaaatc	cagaaagtac	840
atccccaaaa	ctttcagacc	agatgtgaga	accat			875

<210> 76

<211> 843  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E33, strain Toluca-3

<400> 76  
 ggtgatgtgc atgatgcagt tgtgggtgcg atgtcgcgcg tcgctgatac agtagcaagt 60  
 ggccctgcaa actctgagag cgtgcctgct ctactgcgg tagaaactgg acacacgtca 120  
 caggtgacac caagtgtatc aatgcagacc agacacgtac acaacttcca cacacgggtcc 180  
 gaatcgtcaa tcgagaactt cttaagccgc tctgcatgtg tctattatgc aacgtacaaa 240  
 acaacagcca gcagacccga agaccaattc gttaggtggt ccatttcata ccgccagggtg 300  
 gcccaactgc gcaggaaaat ggaaatgttc acctacctgc gctacgatgt ggaggtcact 360  
 tttgtgatta caagtcttca ggacccatcg accaacgtaa gccaggatgc tcctgtactc 420  
 acacatcagt taatgtacgt accccccggg ggtccagtgc ccaaaaattc aagagactat 480  
 gcatggcaaa catccaccaa cccgagtgtg ttctggaccg aggggaacgc accaccaagg 540  
 atatccatcc cctttatcag tgtgggcaac gcatacagtt gcttttatga tggatgggtcc 600  
 cactactcac agacgggggt gtatggttac aacaccttaa acgacatggg ccaattatctt 660  
 gtcaggcacg tgaatgaggc aagcccggtt gcggtgtcaa gtgtagttag gatttacttc 720  
 aaacccaaac atgtgaaggc atgggtcccc agaccaccac ggttgtgcca atatgttaac 780  
 gcagcaacgg tgaacttcac tcctgaaggg gtcactaagg cacgtactga tctcatgaca 840  
 aca 843

<210> 77  
 <211> 915  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> E34, strain DN-19

<400> 77  
 ggaatagaag aaactattga cacagtgatc accaacgctt tacaactgtc tcagcccaaa 60  
 ccgcagaaac aactcactgc tcaatccacc gcctcatcca gcggagtcaa ttcacaagaa 120  
 gtgccagcat tgactgctgt ggagacggga gcttctgggt aagccatacc cagcgacgtg 180  
 attgagacca gacatgtcgt caattacaaa actagatctg aatcaaccct tgagtcattc 240  
 tttggtagat cagcatgcgt aaccatactg gaagtagaga acttcaatgc cactaccgaa 300  
 tcggacaaga aaaagcaatt caccacctgg ccaatcacat acaccaacac agtccagttg 360  
 cgcaggaaat tggaattctt tacatactcc agatttgatc tggaaatgac ttttgtcata 420  
 actgagaggt accacacaag taatacagga catgctagaa atcaagtgtg ccaaataatg 480  
 tacataccac cgggtgcgcc aaggcccaca gcacgggatg attacacctg gcaaagttca 540  
 tccaatccat cagtgtttta cacatatggt agcgcgcctc ccagaatgtc tatcccatat 600  
 gttggcattg ccaatgcata ctacaccttt tatgacgggt ttgcccagat tcccctgaaa 660  
 gatgatacaa ctgactccgg tgacactttt tatggattgg tcaccatcaa tgactttgga 720  
 acattggctg tgagggtggt gaatgagttc aaccctgcaa ggataacatc aaagggtcaga 780  
 gtttatatga agcccaaaca tgtgaggtgt tgggtgccta ggccaccgcg cgcagtgccc 840  
 tatcgtggtg aagggttga tttcaaacaa gattcaatca cgccaataac agcagtcacc 900  
 aatattaata ccttc 915

<210> 78  
 <211> 936  
 <212> DNA  
 <213> Enterovirus

<220>  
 <221> misc\_feature  
 <222> (0)...(0)  
 <223> EV68, strain Fermon

<400> 78

tcaaaccact	tacatggagc	agaggcagcc	tatcaggtgg	agagtatcat	caaaacagca	60
actgatactg	tgaagagtga	gattaacgcc	gaacttggtg	tggtccctag	tctaaatgca	120
gttgaaactg	gtgcaacttc	caacactgaa	ccagaagaag	ccatacaaac	tcgcacagta	180
ataaatcagc	atggtgtgtc	ggagacgtta	gtggagaatt	ttcttggtag	ggcagcccta	240
gtgtcaaaga	aaagttttga	atacaagaat	catgcctcat	ccagcgcagg	gacacacaaa	300
aactttttta	aatggacaat	taataactaag	tcttttgtcc	agttaagaag	aaagctggaa	360
ttattcacat	accttaggtt	tgatgctgaa	atcaccatac	tcacaactgt	ggcagtaaat	420
ggtaataatg	acagcacata	catgggtctc	cctgacttga	caactccaagc	aatgtttgta	480
ccaactgggtg	ctcttactcc	aaaggagcag	gattcatttc	attggcaatc	aggcagtaat	540
gctagtgtgt	tctttaaaaa	ttctgatccc	ccagctagaa	tgactatacc	ttttatgtgc	600
atcaactcag	catattcagt	tttttatgat	ggctttgctg	gatttgagaa	aaatggtcta	660
tatgggaataa	accagctga	cactattggc	aacttggtgtg	tcagaatagt	gaatgaacat	720
caaccagttg	gttttacagt	gaccgttagg	gtttacatga	agcctaaaca	tataaaagca	780
tgggctccac	gaccaccgcg	aaccatgcc	tacatgagca	ttgctaattgc	aaattacaaa	840
ggtagagata	cagcaccaaa	cacacttaat	gccataattg	gtaatagagc	gagtgtcaca	900
actatgcctc	acaacatagt	aaccaccggt	ccgggt			936

<210> 79

<211> 861

<212> DNA

<213> Enterovirus

<220>

<221> misc\_feature

<222> (0)...(0)

<223> EV69, strain Toluca-1

<400> 79

aatgaccagc	acaatggggc	gatcgttgcc	aacacaacag	ctagcggacc	ttctaattcg	60
gaaagcatac	cggcacttac	tgcggtgag	actggccaca	catcgaggt	tgcccctagc	120
gacaccatcc	agacaagaca	tgtgaaaaac	taccactcgc	gttcagagtc	caccatagag	180
aacttcctgt	gtagatctgc	ctgtgtgtac	tacaccacgt	acaacactca	gggcgagcaa	240
gcacatgata	aatacgcaag	ttggccaatc	acgactagaa	aagttgcca	actgcgcagg	300
aagctggagt	tctttaccta	cctgcggttt	gatctcgaga	tcacgttcgt	gatcacgagc	360
gcccagatca	catccacgaa	ccaaaaccag	gatgccccag	tactcacaca	tcaggtgatg	420
tatgtacccc	caggggggggt	ggtaccgcgc	agtgtggatg	actatagttg	gcagacttcc	480
accaatccca	gcattcttctg	gacagaaggg	aacgcacctc	ctcgtatgtc	aataccattc	540
attagtgtgg	gcaacgccta	cagcagcttt	tacgacgggt	ggtcacactt	tgaacaaacc	600
ggggtatctg	gaattcaatac	ccttaataat	atggggactt	tgtacgccag	gcacgttaac	660
ggtgctagtc	cggggccagt	caagagcacc	attaggatat	atatgaaacc	taaacatgtg	720
aaagcgtgga	tacctaggcc	cccacggttg	tgcgactatg	tgaaatctgg	caacgtcaac	780
tttgaaccaa	aaggagtcac	cgagagcaga	ccatctataa	agttagaaaa	gacctcaagt	840
gggcacaggc	tgacaaccca	c				861

<210> 80

<211> 7

<212> PRT

<213> Enterovirus

<400> 80

Met Tyr Val Pro Pro Gly Gly  
1 5

<210> 81

<211> 7

<212> PRT

<213> Enterovirus

<220>

<223> Xaa(Position 3) = Val or Ile

<223> Xaa(Position 5) = Pro or Thr

<400> 81

```
<220>
<223> Xaa(Position 3) = Gln or His
```

<400> 82

```
<220>
<223> Xaa (Position 3) = Ala or Val
```

<400> 83

```
<220>
<223> Xaa (Position 7) = Ala or Val
```

<400> 84

<400> 85  
 Ala Ala Glu Thr Gly Ala  
                   5

<220>  
<223> Xaa (Position 2) = Phe or Tyr

<223> Xaa (Position 7) = Ala or Gly

<400> 86



1

5

Table 1. Demographic characteristics of the study population	
Age (years)	50.0 ± 10.0
Gender	
Male	100
Female	100
Marital status	
Married	100
Single	100
Education level	
High school	100
University	100
Occupation	
Physician	100
Nurse	100
Other	100
Smoking status	
Smoker	100
Non-smoker	100
Alcohol consumption	
Alcohol consumer	100
Non-alcohol consumer	100
Family size	
1-2	100
3-4	100
5-6	100
7-8	100
9-10	100
11-12	100
13-14	100
15-16	100
17-18	100
19-20	100
21-22	100
23-24	100
25-26	100
27-28	100
29-30	100
31-32	100
33-34	100
35-36	100
37-38	100
39-40	100
41-42	100
43-44	100
45-46	100
47-48	100
49-50	100
51-52	100
53-54	100
55-56	100
57-58	100
59-60	100
61-62	100
63-64	100
65-66	100
67-68	100
69-70	100
71-72	100
73-74	100
75-76	100
77-78	100
79-80	100
81-82	100
83-84	100
85-86	100
87-88	100
89-90	100
91-92	100
93-94	100
95-96	100
97-98	100
99-100	100